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PAPER TRADE JOURNAL

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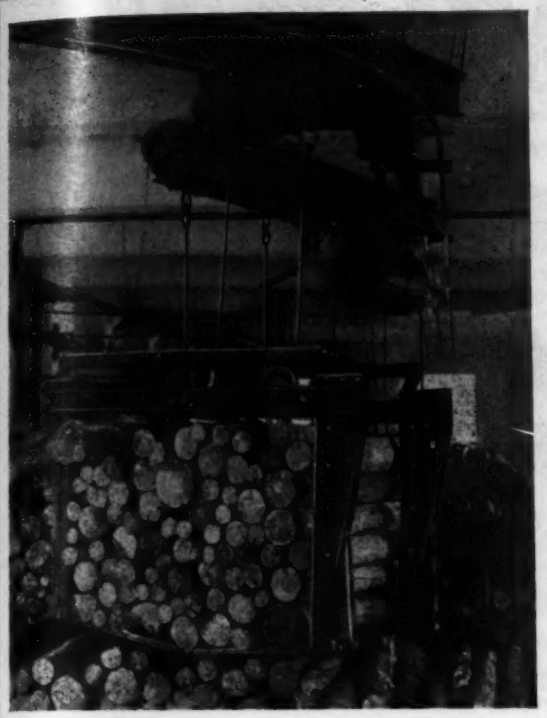

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PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-FIFTH YEAR

Published Every Thursday by the

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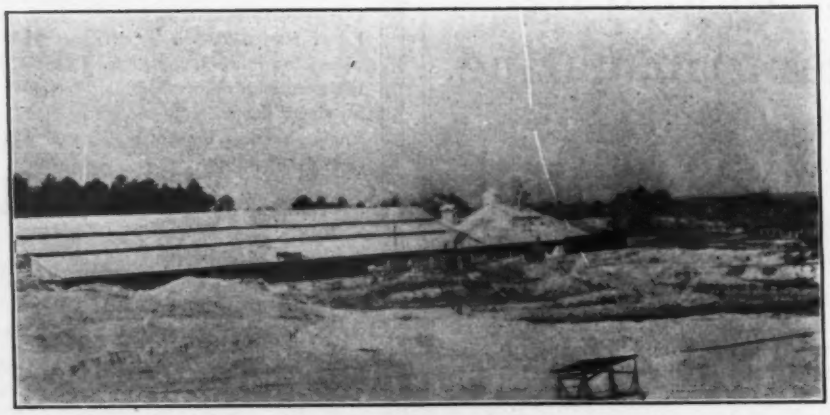

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PAPER

The Magazine of the Paper Industry

Vol. LXXXIII, No. 22 — Thursday, November 25, 1926

Anglo-Canadian Co. Secures Pulpwood Supply

Timber Limits of Oxford Co., Along Upper Banks of Montmorency River, to be Taken Over Shortly, Thus Ensuring Ample Supply of Pulpwood Almost at Door of New Mill Being Constructed at Limoilou—Many New Pulp and Paper Enterprises Planned —Port Alfred Directors Recommend Stock Split

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 22, 1926.—Almost coincidental with the awarding of a contract for the construction of their mill at Limoilou, the Anglo-Canadian Pulp and Paper Company have made a deal with the Oxford Company whereby they will take over the timber lease of that concern along the upper banks of the Montmorency River, which are held in freehold by the Quebec Seminary. The lease held by the Oxford Company has still eight years to run, so that for the next eight years at least the Anglo-Canadian Pulp Company will have a supply of pulpwood on hand almost at the door of their new property. It is understood that there are something like 2,000,000 cords of pulpwood available on the limits, and as the transaction covers freehold property, the price is said to range between one dollar and a dollar and a half, which would bring the estimated price somewhere between two and three million dollars. The Seminary has granted landing and booming rights on the banks of the river, and these have also been taken over by the Anglo-Canadian Pulp and Paper Company, it is reported.

Stock Split For Port Alfred Co.

At a meeting of the directors of the Port Alfred Pulp and Paper Corporation in Montreal, it was decided to increase the common stock of the corporation from 60,000 shares of no par value to 120,000 shares of no par value. At the meeting of the shareholders called for December 14 to approve the necessary by-laws, the directors will recommend that the new shares be offered to the present holders of common stock at $25 per share, payable $10 per share on December 28, 1926, $7.50 per share on the June 28, 1927, and $7.50 per share on the December 28, 1927.

It is understood that fully paid-up shares will be issued to amount paid-up on the various dates, that is, 40 per cent December 28, 1926, 30 per cent on June 28, and December 28, 1927.

Paper Mill at Cap Rouge

The pulp and paper mills which are to be erected at Cap Rouge, Que., by the St. Regis Paper Company, will cost, it is stated, in the neighborhood of $10,000,000. The mills will be located east of the Federal Government's experimental farm, about nine miles west of Quebec City. Some preliminary work is now underway, and active construction will begin in the spring. Though the capacity of the mills is not known it is planned by the company to construct a large plant. Wharves will be built on the St. Lawrence at the mouth of the Cap Rouge River. This river will be dammed for the floating of the logs, but the power will be obtained from the Quebec Power Company, as far as the operation of the mills is concerned.

Another Mill For Ottawa Valley

Representatives of Nesbitt, Thompson & Co., of Montreal, who are interested in power companies, are reported to have been active in negotiations by which another important news print mill will be located in the Ottawa Valley, near Aylmer. A mill costing between $3,000,000 and $4,000,000, to employ more than 200 men, and to have a daily output of 200 tons is mentioned in connection with the plans which have already been considered by the municipal authorities.

A $30,000,000 Project

Frank P. Jones, president of the Canada Cement Company, is at present in Victoria, B. C., and is reported to be negotiating with the Provincial authorities in connection with the establishment of a $30,000,000 pulp and paper enterprise in the vicinity of Prince George, B. C. It is said that prospects are bright for a favorable closing of the negotiations.

New Mills For Price Bros.?

A report comes from Chicoutimi that it is the intention of Price Brothers & Co., to erect large new paper mills at Grand Baie, Que., and that construction work on these will start in the spring of 1927. Color is given to the report by the statement that the company has purchased large areas of property at Grand Baie. The site is a good one from a transportation point of view, as only a few miles of railway would have to be built to unite Port Alfred with St. Alexis.

Diverting Railroad Trades

Power development by the Canadian International Paper Company at Chelsea, Que., has so raised the water level that it has been necessary to divert six miles of the Canadian Pacific Railway Company's tracks in the Gatineau Valley. This work, which is nearing completion has occurred between mile 8 and mile 14, and affects the stations at Tenaga, Kirk's Ferry, La Charite, Bennet, and Cascade, well-known summer resorts in that district. The cost, which is in the neighborhood of three-quarters of a million dollars, will be borne by the Canadian International Paper Company.

Quietness Prevails in Philadelphia Paper Mart

While Orders for Holiday Trade are Fairly Numerous, Most Consumers Have Already Stocked in Sufficient Quantities to Take Care of Immediate Needs—Active Resumption of Buying Not Expected Until Inventory Period is Past

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., November 22, 1926.—As the mid-month accounts are summed, the distribution of paper in the local markets assumed a quieter trend. While there are a fair amount of orders for many grades needed for the holidays most of this sort of stocking on the part of the consumer has been accomplished in sufficient quantities to take care of needs for the immediate future. Philadelphia mercantile industries have been experiencing a quieter month-end trading period, not at all in line with the customary advance holiday briskness of late November days. This quieter trend in the mercantile industries has of course curtailed the needs of paper supplies for the present.

Fine Papers Less Active

As the inventory season approaches there is a tendency on the part of the larger consumers of fine papers to hold off buying in order to keep stocks at a minimum until after the annual accounting of business is completed. Whatever orders are obtained are for immediate needs of a hand to mouth type. There are no mill offerings at this time, so that trade is not fearful of price inroads, despite the lessened demand for those lines of paper which until the slackened pace of the past week were being purchased in larger volumes than at any time this year.

Coarse Papers Fall Off

With a plentiful supply of wrapping paper and other specialties that are consumed in the holiday trading period in the hands of the mercantile industries, the coarse paper market has drifted into quieter channels pending the rush of last minute holiday buying. Most of the holiday purchases have been made and the consumers well supplied for the time being. Dealers do not look for much more than a hand to mouth buying at this time pending the opening of more active Christmas markets in the coming month. Like the course paper market the mills have been holding off all offerings, and while mill prices are steady, there has been a tendency on the part of a few of the local jobbers of kraft to cut into prices in competitive bidding for business. The coarse paper dealers are convinced that price slashing is not necessary at this season, particularly in those grades of southern kraft which have been subjected to lower quotations within the past week.

Mills Warning of Coal Situation

As a coal shortage looms, due to heavy demands on the American mines from abroad, the mills are sending warning to distributors of the pending restriction in paper manufacture owing to curtailed production. They state their present aims in economy of the fuel and notify the dealers that they are not booking orders ahead because of the uncertainty of the outlook. Quaker City dealers have within the week been warned to guard against this situation, but have not received appeals for orders at this time. The manufacturers clearly indicate their position with regard to future production, declaring they are not in position to give definite information of what may be expected if such shortage occurs. They do however declare that they cannot book orders far ahead of their present demands and desire to make their position clearly understood at this time.

Paper Trade Association Convenes

The special meeting of the Philadelphia Paper Trade Association was held on Monday of this week for the purpose of bringing before the members the various plans for trade development now before the National Association. With President David Lindsay, Jr., presiding, matters of national import were laid before the local distributors and while discussed, no definite action was taken on the subjects just now of vital interest to the industry. The meeting was held at the Bourse Restaurant.

Benjamin C. Betner Co. To Begin Operations on Bags

Following completion of the installation of the power and lighting equipment in the newly constructed buildings of the large bag manufacturing plant erected at Devon, near Philadelphia, by Benjamin C. Betner, in the coming week the newly organized company will begin operations. The firm, known as the Benjamin C. Betner Company, will produce a line of duplex coffee and tea bags, glassine bakery, garment, and chocolate coating bags and others of special design. There will be provided in the completion of the power and lighting plant the firm's own facilities for these requisites in bag manufacturing and lighting. The very latest improved Deisel Air Compressed Oil Engine will provide the power and lighting in combination with the Westinghouse electrical motors and other equipment.

The new plant is one of the most modern and largest of bag manufacturing headquarters in this section with a capacity of 2,000,000 bags per week. It is well equipped for the production of specialty bags as well as general line. On a plot of five acres there has been constructed a main factory, extending 700 feet along the Lincoln Highway, with several out buildings 160 by 70 feet, 60 by 100 feet, and 40 by 60 feet each. All are of single story construction, of hollow tile and plaster cast finish.

The head of the firm is Benjamin C. Betner, for more than 25 years identified with the bag manufacturing industry and the founder of the bag manufacturing business of the Thomas M. Royal Company. He organized the bag manufacturing plant of the Royal Company a quarter of a century ago and was, up to a year or so ago, connected with that firm as first vice president, severing his connection to organize his own concern and to build the present modern Devon manufacturing headquarters. Excellent transportation facilities and advertising are provided for the Betner company along the main line of the Pennsylvania Railroad. A large sign, 150 feet by 4 feet high, has been constructed along the railroad so that all trains for the West are within ready view of the ad matter emblazoned on the board. Railroad sidings provide ample shipping conveniences and service for the speeding of shipments.

S. Walter, Inc., Extends Truck Service

Having found that the White Auto Trucks are adaptable for better service in transportation of paper products, S. Walter, Inc., 144 N. 5th street, has extended its fleet by the addition of another White car. There now are four of the White Trucks in use by the firm, and with the additional 3 ton delivery auto added last week, five of this make are in use. With the expansion of the delivery service the sales organization has been augmented by two new members to cover Philadelphia and vicinity.

Anderson-Bechman Co. Organized

Philadelphia has added another paper house to its list of distributors, through the organization of the Anderson-Bechmann Company just opened for business at 611 Cherry street, following the incorporation of the company. The firm will specialize in card boards and is stocked with a complete line of cards manufactured by the foremost mills of the nation. There has been installed the newest type of cutting machine in a well equipped cutting department devoted to the conversion of cut cards now marketed

under the company's own mark, that of the Clover Leaf Brand. There will also be manufactured a line of announcements. Among the grades of fine papers which the company will handle are those of flat stocks for the printing trades.

Under the incorporation of the company the following officers have been elected;—President, A. H. Anderson; Vice President, William Bechmann; Treasurer and General Manager, C. H. Bechmann; Secretary, W. L. Dorsey. Vice President Bechmann is a retired textile manufacturer and is active only in an advisory capacity. He is the father of C. Howard Bechmann, its treasurer and general manager, is financially interested in the concern, and will aid materially in the development of the business as the needs for expansion require.

President Anderson has for many years been associated with the Philadelphia paper trade, having formerly been identified with A. S. Datz & Son, and later in business on his own account. Through the development of the new concern he will be able to cover a broader field for his own specialized paper lines of card board and flat papers for the printing trades which he has featured for more than fifteen years in the local territory.

Norbert A. Considine Congratulated

Trade associates of Norbert A. Considine, president of the Paper House of Pennsylvania, 28 N. 6th street, have been generously extending congratulations to the popular paper distributor during the last few days on the arrival of another "junior member" of the firm. There arrived at the Considine home last week, the third of the "juniors," a bouncing boy.

Insurance Adjustment Bureau Postpones Hearing

The hearing in the suit brought by Sylvester Garrett against the General Adjustment Bureau for payment of services rendered as paper expert in estimating damages for the insurance companies involved in the fire at the Garrett-Buchanan Company headquarters back in 1923 has been postponed. The case, which was to come up for trial this week, was postponed for two months upon request by the Bureau and heads the list for Court action after the first of the new year. The adjustment of the $300,000 damages through the services of Mr. Garrett as expert was $2,500, the amount involved in the suit.

Henry W. Stokes Attends Wrapping Paper Meeting

Henry W. Stokes, president of the Wrapping Paper Manufacturers Service Bureau, and of the York Haven Paper Company, journeyed to New York in the week to preside at the meeting of the Bureau held at the Waldorf Hotel. Other paper manufacturers identified with the Bureau with offices here, were the officials of the Cherry River Paper Company.

Andrews to Visit Western Mills

A tour of the Western paper mills is included in the itinerary of James Andrews, of the Schuylkill Paper Company, with offices in the Drexel Building. He will include the mills in Wisconsin, Michigan and others in the Great Lake section before making his homeward journey. The mills to be covered are those represented in the local territory by the Schuylkill Paper Company.

Champion Coated Paper Co. Holds Printers Meeting

Printers and allied associates in the industry were represented at the specially arranged gathering held by the Champion Coated Paper Company, under auspices of the local manager of the paper manufacturers, Charles A. Labor, in cooperation with E. Kenneth Hunt, advertising manager, directly representing the mills, at Raleigh, N. C., in mid-November. Mr. Hunt took the southern printers through the various processes from the growing of the timber in the North Carolina forests of the company, to the preparation of the pulp in the mills at Canton, N. Carolina, and finishing of the products at the Hamilton, Ohio, paper plant. The Epes-Fitzgerald Paper Company, of Raleigh, sponsored the meeting as an educational feature of its paper distribution business, and representatives of the Champion company.

Consolidated Water Power & Paper Co. Changes

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 20, 1926.—The controlling interest in the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis., is understood to have passed into the hands of George W. Mead, president, this week, with announcement that he has purchased the interests of Isaac P. Witter, treasurer and one of the largest stockholders. At the same time this news was made public, the resignation of George P. Berkey as vice president and general manager was also announced. Mr. Witter will devote his time to banking and other interests, but plans of Mr. Berkey have not been announced.

Mr. Witter stated that his health has been poor for the last year and he was convinced that he should relinquish responsibility and his holdings of considerable size. He therefore decided to retire and dispose of his interest in the company. He will continue as president of the First National Bank of Wisconsin Rapids and devote his time to this and other corporations in which he has an interest. It is Mr. Witter's plan also to spend considerable time in travel in hopes of regaining his health and strength.

Isaac P. Witter's connection with the Consolidated Water Power and Paper Company dates back to its origin 25 years ago. His father, Jere D. Witter, merged the various powers on the Wisconsin river and formed the company. In 1902 the elder Mr. Witter died, leaving his holdings to the Witter estate, of which the son was principal heir. In cooperation with Mr. Mead, who is Mr. Witter's brother-in-law, the company was carried on in its organization affairs and the local mill, the first of the chain operated by the company, was started in operation in the manufacture of news print. Up to this time this has been the major product of this company.

Major development of the company has been in the hands of President Mead. The Consolidated now owns and operates mills at Wisconsin Rapids, Biron, Stevens Point, and Appleton, Wis., and Port Arthur, Ont. It also owns or controls extensive timber holdings in Canada and elsewhere and operates its own transport lines on the Great Lakes.

Jere D. Witter, son of Isaac P. Witter, also has resigned from the Consolidated company. He was in charge of the store room and employment work at Biron mill.

The resignation of George P. Berkey as vice president and general manager ends a career of 18 years with the Consolidated company. The announcement was accompanied by expressions of regret on the part of Mr. Mead that their connections of long standing were severed. The resignation takes effect at once

Mr. Berkey came to Wisconsin Rapids to join the Consolidated organization in 1908, shortly after his graduation from Yale University. As the company expanded and new mills were acquired, he had active charge of the reorganization and management of each mill. In 1920 he went to Appleton, Wis., as manager of the Interlake Pulp and Paper Company when purchased at that time by the Consolidated company.

Within a short time Mr. Berkey was called back to Wisconsin Rapids, where he became general manager of the company. He has been a director for a number of years, and also has been an officer and director of the Thunder Bay Paper Company, the Newayco Company, Ltd., and various other subsidiaries of the Consolidated company.

Paper Industry Represented at Coal Conference

W. E. Byron Baker, chief chemist of the Continental Paper and Bag Mills Corporation, and W. A. Pitts, of the York Haven Paper Company, represented the paper industry at the International Conference on Bituminous Coal, held at Pittsburgh, November 15 to 18. The paper industry is a very large consumer of coal and is tremendously interested in the new developments in the use of pulverized and powdered or liquified coal.

Demand for Paper Steadily Expands in Toronto

Increased Request for Larger Supplies Caused by Provincial Elections in Ontario — Book and Writing Paper Manufacturers Experience Active Conditions — Paper Box Plants Rushed With Christmas Specialties—Prices Holding Up Very Well

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., November 22, 1926.—The wholesale paper trade is going along steadily and the provincial elections in Ontario, which are now in progress, have created a lot of printing of all kinds for the various candidates. The result is that jobbers have been called upon for larger supplies than usual at this season of the year. One wholesaler stated that he had disposed of forty tons of paper since the commencement of the campaign. Others declare that quite a difference has been made in their output. The book and writing mills generally are busy and coated paper plants are doing a fair amount of business, considering that some paper manufacturers are making a special effort to sell offset paper, which is coming into more general use. Paper box plants are rushed on Christmas specialties.

In the rag and paper stock market, cotton rags are especially weak and collectors believe when they start to move that prices will be even lower than they are at present owing to the slump in the cotton market in the south. No. 1 white shirt cuttings are now quoted nominally at 10½ cents a pound and fancy shirt cuttings at 5½. In the waste paper line dealers are disposing of a lot of stock to book mills and collections are large from paper box plants, printing shops and other sources. No difficulty is experienced at present in disposing of all gathered-in material. In other ranges of paper, including wrappings, trade is satisfactory and holding up well, all things being considered.

Temporary Pulpwood Shortage

Owing to the rainy weather and deep mud in the northern part of the province there is not much pulpwood being shipped out at present. Conditions under foot are such that it is impossible to haul or load at the railway sidings on any large scale. The result is that those mills which have not a large "wood-pile" but depend on regular shipments, are running low in supplies and some consumers are getting rather anxious, not having more than two weeks' quantity ahead. With colder days and a fall of snow, which would stay, all worry would be removed but the weather of late has been very capricious. The Thompson and Heyland Company, Toronto, who are large exporters and dealers in pulpwood, have already contracted for over 100,000 cords for delivery during the coming year. Prices on pulpwood remain about the same as last season with a tendency to stiffen a little and with every prospect of a greater amount than last year being taken out.

Eddy Co. Not Selling Out

E. A. Schofield, of the Schofield Paper Company, St. John, N. B., president of the Canadian Paper Trade Association, who recently returned from a trip to Hull, Que., denies a report which has been circulated throughout Canada that the E. B. Eddy Company, of Hull, has been sold to a group of capitalists. Mr. Schofield said that he was authorized by the executive to state that, instead of selling, the Eddy Company is planning extensions for forward movements.

Labor Minister Settled Strike

How the Hon. Peter Heenan, Dominion Minister of Labor for Canada, recently averted an incipient strike of 500 bushmen in a lumber and pulpwood camp north of Fort William, Ont., is an interesting event. The Minister walked into the camp, talked to the bushmen, coaxed them, overcame their prejudice against their employers and finally led them back to work, all within 24 hours. Convinced of the justice of certain of the men's grievances, the Minister promised correction and laid before the employers a basis of compromise which was accepted. This took place a few days ago, Mr. Heenan hearing of the strike as he was leaving Kenora after arranging for the by-election, when he was re-elected by acclamation.

Pulp Mill Agreement Null

An agreement, granted by plebiscite in New Westminster, B. C., to the Canadian Rayon Pulp Company, giving a fixed assessment on Poplar Island, provided the company had expended $50,000 on improvements to the Island before November 1, has been declared null and void. It is stated that the promoters experienced difficulty in financing the project, which was incorporated in Victoria, B. C., with a capital of $2,800,000. The company, it is rumored, will aproach the city council of New Westminster at a later date for renewal of the agreement, probably for a plant on smaller plans.

Canada's First Coating Mill

There has been issued by Ritchie and Ramsay, Ltd., coated paper manufacturers, Toronto, a handsome and well illustrated publication entitled "The Story of Paper," by John Henderson. The booklet is printed on coated stock with the title on a gold disc. Mr. Henderson says that the Ritchie and Ramsay mill is a place of Scottish origin, which has become Canadianized. It was started thirty-four years ago by Scotsmen, who were specially imported from the land of the heather because they were expert craftsmen, makers of Britain's finest super grade papers. Now practically every employee is a Canadian and each is an expert at least as efficient as those first immigrant specialists. It is a pleasing mill and a clean place.

Pulpwood Executives in Session

A meeting of the Executive of the Canadian Pulpwood Association was held at the King Edward Hotel, Toronto, on November 16 and 17. Arrangements were made for the annual convention which will be held in Montreal the first week in February. Prospects for the coming season were discussed and it was agreed that the demand for pulpwood is better than a year ago owing to the augmented output of news print. It was felt, however, that prices were still too low and the hope was expressed that they would in the near future be increased. In the absence of Angus McLean, of Bathurst, N. B., president of the Canadian Pulpwood Association, James Thompson, of the Thompson & Heyland Lumber Company, Toronto, presided. Among those in attendance were: Ralph P. Bell, of Halifax (through whose activity and energy the Association was formed two or three years ago); A. G. Auger and J. O. Auger, of Quebec; Joseph Grogan, Quebec; J. O. Amyot, Quebec; W. H. Russell, Port Arthur; Ephrem Lagueux, Tring Junction, Quebec; F. W. Perras, Gracefield, Que.; W. Roy Smith, Annapolis, N. S.; R. Girouard, Smith's Falls, Ont.; J. B. Kemp, Pembroke, Ont., and Charles E. Clowes, Fredericton, N. B.

Progress of the North

Cyril T. Young, superintendent of development, Canadian National Railways, Toronto, in speaking before the Progress Club, paid particular reference to Northern Ontario. In regard to pulp and paper, he stated that the pulp exports had increased 645 per cent and paper exports 1,476 per cent in the last twelve years. In 1809 Canadian exports of pulp and paper amounted to only $120, while last year (36 years later), the exports in pulp and

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paper from the Dominion amounted to $236,000,000—half the value of the western wheat crop. The 114 mills in Canada employed 28,000 people, paying in wages and salaries $38,560,905 and representing a capital investment of $460,397,772. Mr. Young stressed the advisability of Canadians becoming more interested in their own natural resources and in this regard he looked forward to Canadian banks taking a greater interest in developing the rich assets of the country.

Western Project Will Proceed

H. G. Perry, M.P. for Prince George, B. C., has received assurances from the Hon. T. D. Pattullo, Minister of Lands for British Columbia, to the effect that an early start is likely to be made upon the $30,000,000 pulp and paper mill enterprise near Prince George. Frank P. Jones, of Montreal, has been conducting negotiations with the Hon. Mr. Pattullo for some time.

Notes and Jottings of the Industry

G. W. Pauline, President of Ritchie and Ramsay, coated paper manufacturers, Toronto, has returned from a business trip to Regina, Sask.

C. F. Mansell, veteran paper salesman for the Howard Smith Paper Mills, Toronto, who was laid up for a few days with illness, is able to be around again.

The many friends of C. Hall, manager of the envelope department of Dominion Envelope and Cartons, Ltd., Toronto, are extending sympathy to him on the recent death of his father.

John Hewitt, Jr., President of Paper Sales, Ltd., Toronto, has returned from a successful deer hunting expedition in the vicinity of Sudbury, Ont.

E. Pullan, Ltd., "Waste Paper King of Canada," has the contract for gathering the old directories of the Bello Telephone Company in Toronto and it is expected that about one hundred tons will be recovered in the waste paper line from this source.

Charles E. Clowes, of Fredericton, N. B., who is a member of the executive of the Canadian Pulpwood Association, spent a few days in Toronto last week calling on friends in the trade.

The Fielder Paper Box Company, 170 Berkeley street, Toronto, have completed a two story addition to their plant. The former business office on the ground floor is being used for factory purposes and the staff has been removed to a new location on the second flat.

W. H. Russell, President of the Russell Timber Company, Port Arthur, Ont., who are large pulp wood exporters and dealers, was a recent business visitor to Toronto.

Richard Beaston, pulpwood buyer for the West Virginia Pulp and Paper Company, Tyrone, Pa., was in Toronto during the past week, the guest of James Thompson, of the Thompson and Heyland Company, and took a trip to Northern Ontario on an inspection tour.

A hundred foot extension to the pulpwood carrier of the Howard Smith Paper Mills at Cornwall, Ont., is being built.

The F. N. Burt Company, manufacturers of sales books, whose head office is in Toronto, is, according to the present, S. J. Moore, doing a very satisfactory business at the present time. While no secrets regarding the current year's earnings can be learned, it is understood that there is no intention at present of increasing the dividend.

Australian Paper Organizations Amalgamate

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 23, 1926.—Announcement has recently been made of the amalgamation of the Australasian Paper and Pulp Company Ltd., and the Cumberland Board Mills, says Assistant Trade Commissioner Foster, at Melbourne, Australia.

The new company will be known as the Australian Paper Manufacturers, Ltd., with head offices at Melbourne. It is reported that the two companies concerned will not be put into liquidation, but in future will act only as companies hold a proportionate share interest in the new company.

Tissue Mill Explosion Investigated

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., November 18, 1926.—While a beater roll in the plant of the Interlake Tissue Mills, Ltd., Thorold, Ont., was being repaired a few days ago, an explosion occurred in which two men were killed and three others were injured. The explosion was a deep mystery and an investigation into the cause of the catastrophe has been conducted by C. Nelson Gain, manager of the plant, George Carruthers of Toronto, president of the company, and A. P. Costigane, safety engineer of the Ontario Pulp and Paper Makers' Safety Association.

It was thought that the explosion was caused by some agency inside the beater roll, the existence of which was unknown to the management. A fibrous material, adhering to the spiders after the explosion, created suspicion and, when small samples of this material, exposed to crude test, in the open, flamed immediately on application of a light, the tentative conclusion was arrived at that this material was of an explosive nature. Experts were called in, Mr. Brennan of the Factory Inspection Department, Dr. Bulmer of the Department of Industrial Hygiene, Toronto, and Capt. Stearn of Brantford.

Due to the light thrown on the situation by the preliminary analysis inquiries were made as to the source from which the beater had originally been obtained by the Interlake Tissue Mills, Ltd. It was ascertained that it had been purchased from the Munitions Board from the plant of Nobels, Ltd., Parry Sound, Ont., in 1919 at the time when munition factories were being dismantled.

Such beaters, according to Captain Stearn, had been used by the Munitions Board at various plants from beating the fibrous material which forms such a large percentage of nitro-cellulose. It is assumed, that, as beater rolls are fitted with wood staves and iron bars alternating and, as allowance is usually made for wood expansion, a certain portion of nitro-cellulose of a highly explosive nature, which had percolated the roll before the immersion in liquid, had caused the wood staves to swell and make the roll right.

If that were the case—and the substance formed inside the roll appears to prove it—then that substance of a highly explosive nature had laid dormant inside the roll for over six years. Although the same repairs had been carried out successfully on an occasion previous to the one under review, conditions seem to have been right to cause an explosion. The fact that an electric drill was used to bore out the stump of a stud appears to have as far as is known, been the agency to set things going. Whether this was due to a spark from the drill or to heat generated from boring through the material, has not yet been determined.

The fact remains that, while a stud butt was being drilled out, immediately on the point of the drill penetrating to the inside of the beater roll, a violent explosion took place.

The object in publishing a detailed report of the occurrence is to warn all other mills which purchased beaters, felt-rolls, piping or other equipment from the same or similar sources, to use every precaution in preventing a similar disastrous occurrence. It is suggested that all beaters bought from this, or other munition sources, should be opened up after the inside has been flooded and neutralized by the use of a 10 per cent solution of sodium sulphide.

Index Number for Paper and Pulp Lower

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 23, 1926.—The wholesale index number for paper and pulp for October is given at 156.8 compared with 164.3 for September and 174.0 for October of last year, taking 1913 as 100 per cent.

The best drive for paper mills

The Pulmax Drive

Standard Pulmax Drive. There is a standard Pulmax for every kind and size of drive in your mill.

75 H. P. Beater Drive. Operating on 8 foot centers. It is one of 6 units replacing chain drives.

100 H. P. Beater Drive. Unusually difficult driving conditions have been overcome by this Pulmax Drive.

50 H. P. Blower Drive. Operating on 3 ft. 9 in. centers without slippage or belt wear.

The Pulmax Drive operates with a continuous efficiency of 97% or more regardless of load conditions, humidity or belt stretch. Slippage is eliminated.

The Pulmax Drive permits the use of high pulley ratios and, therefore, high speed, less expensive, more efficient motors and the utmost economy of floor space. It requires no attention and belt service is materially increased.

TRY ONE

Before you install your next drive let us tell you what the Pulmax Drive can do. Compare it with any other drive. We'll gladly let you have one on 30 days trial for any service in your mill.

BIRD MACHINE CO.
SOUTH WALPOLE, MASS.

Scores of Pulmax Drives are successfully operating in pulp and paper mills on

- Beaters
- Jordans
- Press Rolls
- Calenders
- Screens
- Pumps
- Fans
- Line-Shafts
- Compressors
- Agitators
- Cone Pulley
- Paper Machine Drives

etc., etc.

BIRD MACHINERY

Boston Paper Trade Association Fall Meeting

President Norman Harrower Presides Over Approximately One Hundred Members at Enjoyable Gathering—Following Reception and Sumptuous Banquet, Guests Listen to Fascinating and Instructive Address by Major Forbes-Leith

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 18, 1926.—With approximately 100 members present, the Fall meeting and dinner of the Boston Paper Trade Association was held at the Exchange Club in this city, yesterday evening, November 17. The speaker of the evening was Major F. A. C. Forbes-Leith, R. A. S. C., Fellow of the Royal Geographical Society of Great Britain, who gave a fascinating and instructing lantern lecture describing his trip from England to India by car.

From 5:30 to 6:30 a reception and general social session was held. The party then adjourned to an upper floor for a sumptuous banquet. Practically throughout the dinner an orchestra dispensed plenty of jaz with much animation.

After cigars were lighted a brief business meeting was held at which President Norman Harrower presided. The first business was the election of new members. Two active members were elected, George J. Cadwell, of the American Writing Paper Company, Holyoke, Mass., and Dexter D. Coffin of C. H. Dexter & Co., Windsor Locks, Ct. One associate member was elected. colonel F. L. Thompson, of New York City, formerly an active member.

The chairman appointed as nominating committee of officers for the annual meeting in March the following: John E. A. Hussey, Charles L. Baird, C. S. Proctor, Charles A. Esty, and John W. Vivian.

President Harrower, after the business meeting, introduced Major Forbes-Leith. In his introduction he stated that he had searched around considerably to secure a speaker, and he felt that most everyone in the association would be interested in action. He though that they had a man who through his experience had laid the ground-work for something to tell. He noted that Major Forbes-Leith was in the British Army but retired in 1910. In 1914 he was sent on a secret mission to organize the Armenian Forces to aid the Allies. For this purpose 94 officers were selected, of whom he was one. He fought through the Mesopotamian campaign against the Turks and the Germans. After the war he engaged in scientific pursuits. The next year he was in Persia to get all kinds of species from that country for a museum. His trip to India was the first of its kind to be undertaken.

In his opening words, Major Forbes-Leith gave a brief sketch of the origin of the trip, stating that for years he had cherished the idea of making an over-land journey to India. In the matter of car maintenance he considered the problem very seriously before starting, because if every spare part that might be required and a complete outfit for clothing for several men were taken, at least four cars would be needed, as if one or more cars broke down, the others would have to bear the burden of the extra personnel and equipment. He decided to take a long chance with a single fourteen horse-power car.

There were two other men in the party, and the average weight was 190 pounds. The diarist was Allan Wroe of Leeds, and by arrangement with Pathé Frères. Montague Radknap accompanied them to make a travel film. Personal baggage was limited to thirty-five pounds per man, and the camera, film, emergency rations, spare parts, tools, two spare tubes and tires, and the three men weighed about 1200 pounds, and with the car weighing 2500 lbs., the total load was a little under two tons.

The friends of the party gave them a good send-off, including a civic farewell by the Lord Mayor of Leeds. In London a large crowd gathered in Piccadilly circus. After a farewell lunch in London the party left for Folkestone, taking the ferry for France. The first stop after Paris was Briare, a delightful little village.

The rest of the trip included some very good roads, particularly in Italy and France, and also rough ones. Part of the way the party was able to make ony five to seven miles and hour, and on one section only one mile an hour. The journey included old landslides in Servia and Bulgaria, a welcome by King Boris in Sofia, and detention by Turkish Customs Officers at Adrianople, where the party was confined for five days in a hotel. They also visited Constantinople, going through mud and swamp. They crossed the Bosphorus, took a road built by Alexander the Great, visited Skutari, and Damascus, crossing nearly 600 miles of desert to Bagdad. Other places in the journey were the ruins of Babylon, Ctesiphon, the Pai Tak Pass and the Salt desert of Kun, and Ispahan.

The latter part of the journey included a stop at Persepolis. The last 750 miles of the trip was through the hills of India, and on the borders of Afghanistan it was necessary many times to go on the sleepers of the railway track, arriving on October 24, 1924, at their goal,—Guetta, in India. The entire trip included 8527 miles, of which 3000 lacked road or track. The party was 5½ months on the road, but running the car only 96 days.

Major Forbes-Leith was given hearty applause. Several lingered to talk with him.

Those present at the meeting included the following:

N. Harrower, Maj. F. A. C. Forbes-Leith, R. A. S. C., Joseph D. Snell, J. D. Munro, Ralph E. Joslin, E. B. Dow, A. E. Crowell, F. A. Jucket, R. A. Welch, T. P. Parker, H. R. Hopkins, W. J. McLellan, Wm. Ross, W. E. Porter, Jr., John W. Vivian, Don Weston, Don Brown, G. E. Crowell, W. E. Su'livan, N. S. Clark, T. F. Peck, E. L. Cummings, F. B. Korbel, W. N. Stetson, Jr., N. J. Patterson, Bryant McQuillen, William H. Hilton, Edward H. Little, George D. Allen, F. B. Hoffses, Arthur C. Hall, R. F. Chapin, Max Frouk, Clifton S. Hall, J. F. Blackman, F. T. Dolbrare, Walter P. Simonds, Chas. W. Wood, Frank C. Cate, John R. Bartlett, Leon H. Young, Frank H. Merrill, F. E. Willsher, W. W. Brigham, Percy E. Weston, Arthur L. Hobson, J. E. A. Hussey, W. B. Stevenson, S. W. Bartlett, Chas. W. Fields, Charles L. Baird, A. L. Ham, Arthur E. Ham, Harry W. Morgan, Erving F. Lowe, J. G. Swift, F. H. Keep, H. A. Wingate, D. D. Coffin, Waldo E. Pratt, M. L. Madden, W. B. Merlin, F. W. Power, E. H. Stone, Ralph H. Fales, E. D. Bement, R. A. Wight, Walter E. Perry, H. A. Lindenby, Thos. Compton Walsh, J. H. O'Brien, T. C. Casey, H. C. Upham, M. H. Warren, E. P. Ham, R. P. Teele, F. Bendel Tracy, Hubert L. Carter, W. R. Elliott, T. Henry Savage, C. Edward Rice, John Kelley, Walter Dobson, A. F. Fay, W. W. Jenks, H. L. Daniels, W. H. Loud, E. S. Clark, C. Frederic Wellington, Wm. A. Merrill, F. B. Cummings, P. H. Mohun, T. H. Casey, H. C. Thayer and W. J. Raybold.

Hammermill Paper Co. Staff Changes

ERIE, Pa., November 20, 1926.—The Hammermill Paper Company announces the appointments of C. W. Chabot as director of distribution, and of Harrison R. Baldwin as manager of sales. The position of director of distribution has been created in order to bring their merchandising activities, including every phase of selling and advertising efforts under one direction.

Mr. Chabot will continue in the capacity of advertising manager. Mr. Baldwin succeeds Mr. Eppy as manager of sales, with full authority in that department.

WHAT IS QUALITY?

Webster Says:-

"An essential property"

Puseyjones Stuff Pumps are pumps of quality.

We have in stock available for prompt shipment Three 8 x 18 Triple Stuff Pumps that are priced right.

Ask Us

The Pusey and Jones Company,

WILMINGTON, DELAWARE

Chicago Paper Market Enjoying Active Period

News Print, Kraft, and Higher Quality Book Mills Busy With Rush Shipments—Chicago Fine Paper Dealers Considering the Adoption of Thousand Sheet Unit—Price Cutting and Under Bidding in the Paper Box Industry

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., November 20, 1926.—There is no doubt but what the question of a 1,000 sheet unit replacing the 500 sheet unit is the most apropo subject for discussion among fine paper dealers around the Chicago market. From several sources it seems to be the general opinion that the same question is interesting dealers all over the country. W. N. Gillette, of the Chicago Paper Company, vice president of the National Paper Trade Association, left Thursday night for Louisville to attend a meeting there where he believes that the matter will be definitely decided upon one way or the other.

Several Chicago dealers were under the impression that the discussion would be completed and the final action taken on the subject this week, but all of the dealers are not yet certain that such a move would be the best for all concerned. A report, circulated some time ago, that the association had decided to supplant the 500 sheet unit, was not correct, due to the fact that several concerns backed out of any agreement when certain well known houses decided that the step was too drastic to make without a great deal more discussion.

The present method, based on full and broken package prices, if changed, will affect the printer, who will have to pay more for broken lots. Paper houses, according to several authorities, have found out that smaller orders are definite losses and they believe that wholesale houses will stand a greater chance of getting a rightful profit by the more new arrangement.

It is also believed that such a move will be of advantage to the printer in that it will simplify their present methods of figuring and will eliminate many mistakes that often arise in dealing with broken, small lots.

Two or three of the larger Chicago houses who prefer to remain in the background as far as their names are concerned, have announced their intention of invoicing paper to their customers on the 1,000 sheet method of billing, but on the old basis of prices. In effect, this will be nothing more nor less than a form and even later on dealers believe that such a billing will only affect prices in small orders.

Mr. Gillette has worked on the proposed plan for nearly two years and he is anxious to see it go through. There is some indication that dealers in the Middle West are waiting to see what dealers along the Atlantic coast and in the East proper are going to do about it. Nearly every dealer believes that that section, as a whole, is in favor of such a move and a spirit of optimism prevails in this section, where it is believed that only a few organizations are opposed to the change.

Whereas the report was circulated a week ago, that the matter was to be definitely decided this week, Mr. Gillette and other dealers are of the opinion that it will be another week before the Association is uniformly in sympathy with the change.

Box Manufacturers Busy

The Carton Club of Chicago reports that members of their association have been so busy that they have been unable to have regular meetings. Local manufacturers have been watching with interest the union trouble in the East, though they have experienced no difficulty with that organization here. The general consensus of opinion seems to be that the local union is too weak in Chicago to cause any disturbance.

Paper box manufacturers are continually confronted with the danger of price cutting and under bidding on the market, due to the fact that there are far too many manufacturers in this vicinity that the amount of business would warrant. During the war many concerns installed extra machines to take care of war time demand and, instead of charging these additions off to profit and loss when the reaction came, they have endeavored to still keep them in use, thus providing for a supply that the demand can hardly take care of.

The paper box industry seems to be one business that has not yet conformed to the era of specialization that now characterizes many industries. All manufacturers make every kind of a box instead of one manufacturer sticking to one special type and another to an entirely different product. This fact bears heavily on the manufacturer as he is forced to compete with every different line without the aid of specialization.

A few concerns are making articles of just a little higher grade and quality in an effort to overcome this detriment and get a fairer price on the market. Nevertheless, the majority of the manufacturers are constantly confronted with the bugaboo of price competition and with the necessity of carefully and sometimes hopelessly grubbing the field in an effort to find buyers who will absorb the plentiful supply that is on the market. However, at this season of the year there is plenty of business for all.

Edgar Hall Addresses Iowa Paper Men

Edgar A. Hall, Jr., of the Pilcher-Hamilton Paper Company, and president of the Chicago Paper Association of wrapping paper dealers, gave a talk to the members of the Iowa Paper Trade Association, November 18, at the Hotel Montrose in Cedar Rapids. Mr. Hall was the principal speaker of the evening and he discussed the desirability of making a close survey of the paper business with an eye toward finding out what lines might be profitable and making them pay, or finding out those that are a losing proposition and dropping them from the list.

Chicago's Paper Association's Membership Campaign

The Chicago Paper Association will endeavor to get more local dealers interested in the work of their organization at a meeting to be held at the Illinois Athletic Club next Tuesday evening, November 23. At that meeting all wrapping paper merchants who are not members of the association will be invited guests, and though they will not be urged to join, they will be given an opportunity to see for themselves just what the organization is trying to do and what it has accomplished in the past.

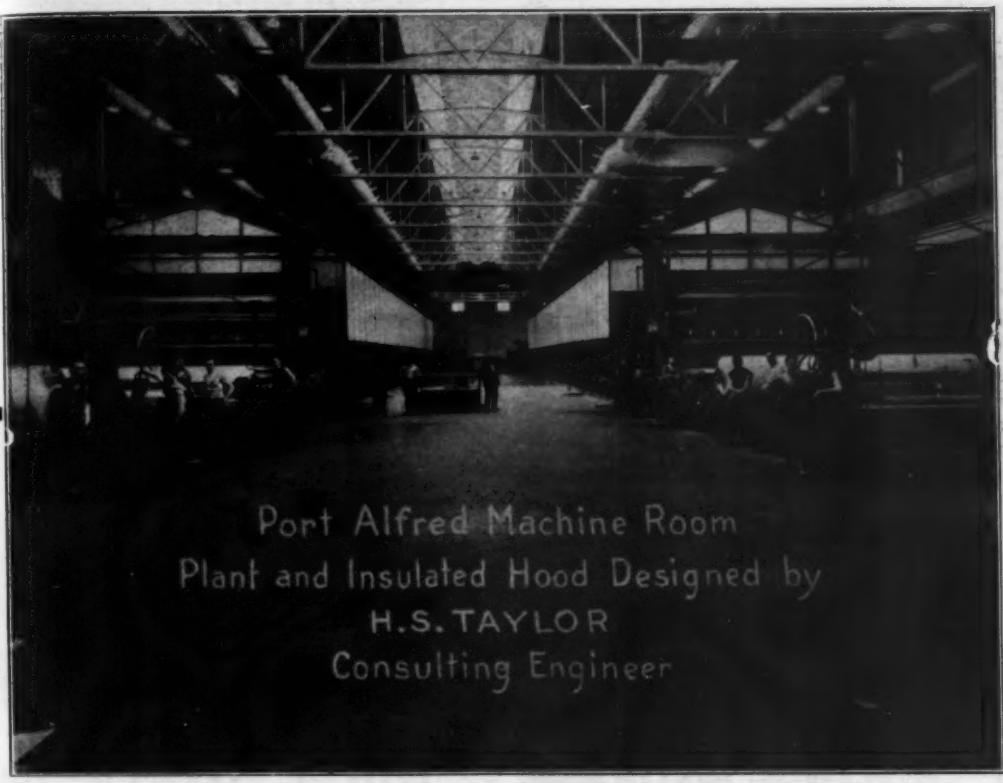
The chief accomplishment of the Chicago Paper Association is in the elimination of any harmful price cutting and unfair methods of competition among dealers. Their program for 1927 is a worth while one and includes the following: an effort to establish a workable credit association, a systematic school of training for salesmen, and the introducing of a more simple system of size, weights and accounts.

Central States Paper Men Meet

The Central States Paper Trade Association met in Louisville, November 19. Several fine paper dealers from Chicago attended the meeting, among them being W. N. Gillette, of the Chicago Paper Company. A discussion of the adoption of the 1,000 sheet unit was one of the chief topics at the meeting.

An Optimistic Report

J. H. Coy, secretary of the Chicago Division of the Salesmen's Association of the Paper Industry, has been away from his office on a business trip to Kansas City and St. Louis during the past two weeks. Mr. Coy reports that all kraft mills are busy and that the higher quality book mills are also doing a good business. The



Here's The Story Told By This Photograph!

This is an unretouched photograph of the two giant machines in the Port Alfred Mill at Port Alfred, Quebec.

The photograph was taken with both machines running at their full production speed.

The distance from the camera to the extreme farther end of this machine room was approximately 300 feet.

Note the clearness of detail of the wall at extreme wet end of the room.

No amount of written or spoken words could possibly provide such irrefutable proof of absolutely effective machine room ventilation. The photograph tells the story.

J. O. ROSS ENGINEERING CORPORATION

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ROSS ENGINEERING OF CANADA, LIMITED

NEW BIRKS BLDG., MONTREAL

ROSS SYSTEMS

HEATING—VENTILATING—DRYING

news print mills are also contributing their bit to the atmosphere of optimism that pervades the paper market. Orders are being placed with the "rush shipment" provision attached to them. This seems to indicate that dealers are waiting until they need paper before buying it, which serves as another indication of the stability of the market.

Paper Carton Business Expands

Dealers in paper cartons and fiber shipping cases report a big increase in business in the past two weeks. They do not attribute this increase to holiday conditions but rather to an improvement in general business conditions. Local business publications report that a greater percentage of people are employed now than at any other time this year.

Greene Family Increases

L. O. Greene, salesman for the Pilcher-Hamilton Company, was agreeably surprised a few days ago when, expecting the arrival of a new member of the family, the stork crossed things up and delivered twins as a most pleasing Christmas present. Mr. Greene is receiving plenty of congratulations from the entire company.

Bookanwrap Going Strong

The "Bookanwrap," monthly publication of the Pilcher-Hamilton Company, is making a big hit among customers and friends of that organization. H. W. Borchardt, the editor, has filled the entertaining little publication with bits of wisdom, humorous and timely jokes and clever items of good advice. Edgar A. Hall, Jr., who is one of the members of the editorial staff, contributed some excellent poetry to the November issue which is just off the press. Mr. Hall styles himself "The Dreamer o' Dearborn Street" and his poetic contribution, "Lo'd I'se Thankful," is one of the finest little poems in negro dialect that we have ever seen and it expresses the feelings of the wrapping paper dealers, for business is good in that line, and the only trouble coarse paper dealers are having is in getting their orders filled and delivered.

Salesmen to Be Entertained

On Tuesday evening, December 9, members of the Chicago Paper Association are going to entertain all of their salesmen at a dinner. Although the location has not been definitely decided upon more than 500 are expected to be present. George Gibson, of the Wausau Sulphate Fibre Company, and Douglas Malloch, writer and humorist, known as the "poet laureate of the north woods," are to be the speakers of the evening.

Group Insurance in Wisconsin Paper Mills

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 19, 1926.—What will become of the plan in use by many Wisconsin paper mills of insuring their employes under the group idea is problematical since the announcement by O. H. Johnson, insurance commissioner of the State of Wisconsin, that this method is illegal. He contends that it is discriminatory on the part of insurance companies to ask the individual policyholder to submit to an examination and waive that rule in favor of those insured under the group plan.

Quite a number of mills had signed group contracts by which employes had their lives insured either through a premium payment by the company, a partial payment of the fee, or an arrangement where the employe paid the entire rate and enjoyed a reduction through the blanket contract. Usually the amount of the policy increased each year the employe was in service of the mill. No medical examination was necessary in cases of this kind.

The paper mills perhaps will do nothing themselves in this matter but look to the parent insurance companies to bring about an adjustment of the matter so the insurance can go on. A hearing probably will be arranged before the insurance commissioner and some revisions made so the group policies will not be discriminatory.

Fall Meeting of Envelope Manufacturers

PHILADELPHIA, Pa., November 20, 1926.—A joint meeting of the Bureau of Envelope Manufacturers of America and of the American Envelope Manufacturers Association took place November 11 and 12 at the Bellevue-Stratford, Philadelphia.

The attendance was large and included representative envelope manufacturers from both coasts as well as from the north, central, and southern sections of the country.

The annual election of officers resulted in the re-election as president of L. G. Reineman, of the Buffalo Envelope Company. Other officers elected were: Vice-president, J. S. Wiley; treasurer, A. E. M. A., George F. Moss (re-elected); executive committee, E. H. Harms, J. A. Johnston, and J. A. Heinrich.

By action taken at this meeting the Fall meeting of the Bureau, held in the East, will become the annual meeting and will be the regular date for election of officers.

The Bureau welcomed as a new member William M. Perkins, of the Raynor and Perkins Envelope Company, of New York. Mr. Perkins' service in the envelope industry has been one of the longest, and he has been a member of the A. E| M. A. for many years.

The urgent need for corrective legislation on postal rates came in for vigorous discussion. The present rates on third class mail have resulted in terrific decrease in number of pieces of this class of mail handled by the postal service. Unless reduction of third class rates is shortly brought about the reduction in direct advertising and mail order business will mean serious loss to paper manufacturers, merchants, envelope manufacturers and printers.

A talk on business correspondence by Dr. S. C. McLeod, secretary of the National Association of Cost Accountants, was a feature of the Thursday afternoon session.

The next meeting of the Bureau will occur in Chicago next March, the date to be selected later.

Swedish Chemical Pulp Active

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 23, 1926.—Outstanding features in the Swedish chemical pulp market during October were the activity of American buyers in contrast to the lessened demand from British manufacturers, says a report from Assistant Trade Commissioner Kekich.

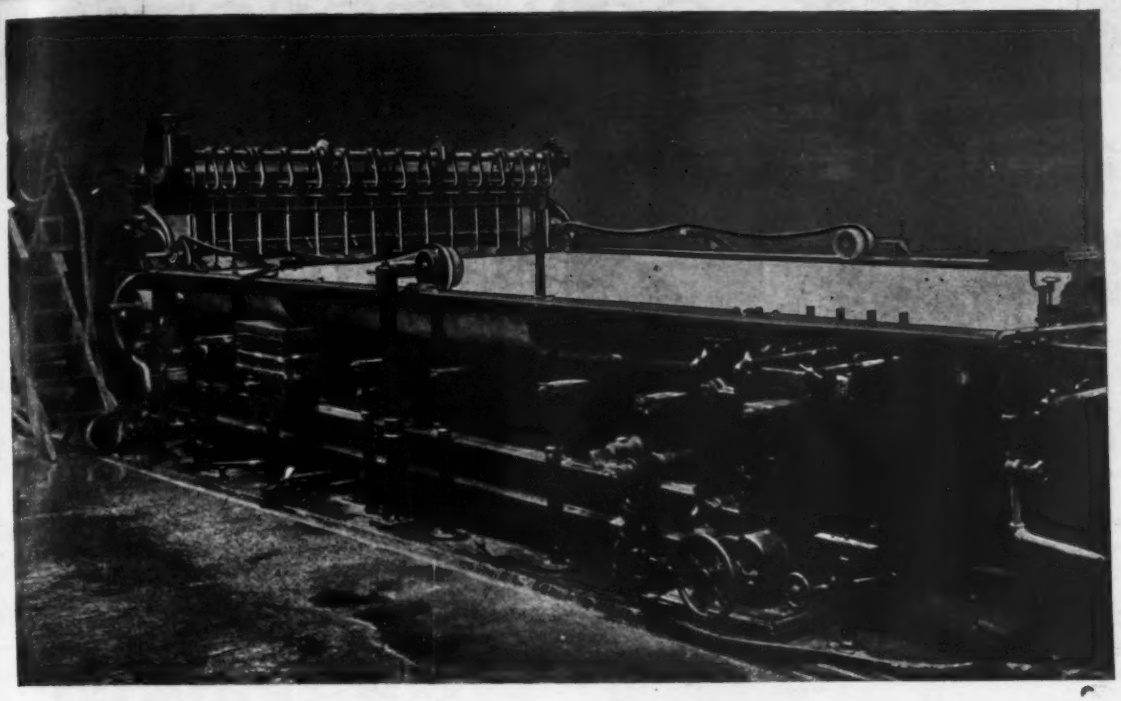
He said further that the falling off in British business is ascribed to the tenacity of the coal strike, and no improvement is looked for until this conflict is over. This year's production of both unbleached sulphite and sulphate is nearly sold out, and more than half of the 1927 output has been contracted for.

The groundwood market was reported somewhat easier due to the settlement of the strike in the Norwegian plants, but production is expected to decrease unless there is considerable rain in th near future. In the paper market little change was apparent, except for the acceleration in sales of wrapping paper. A rather large contract for news print was closed with American buyers. The volume of business in the board market was large with a slight upward tendency in prices noticeable.

Anglo-Canadian Paper Mill Financing

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 23, 1926.—It has recently been announced, says a report to the Paper Division of the Department of Commerce from Toronto, that the financing of the new plant of the Anglo-Canadian Paper Mills which is to vest between $13,000,000 and $15,000,000 will be done in England. Already an issue of debentures has bene sold on the London market where it met with a very favorable reception, and an additional amount of debentures for which provision has been made will also be sold there, as will about $8,000,000 of preferred stock. The new mill when completed will have a daily capacity of 450 tons.



The Voith High Pressure Stock Inlet Makes Better Paper at a Greater Speed

1. IT ASSURES PAPER OF UNIFORM CALIPER

   Ordinary slices on a Fourdrinier machine result in irregular distribution when the stock is injected onto the wire. This causes irregularities in the caliper of the paper across the trim of the machine. Fine adjustments easily made on the Voith Inlet makes a sheet of uniform thickness across the entire width of the wire.

2. HELPS TO ELIMINATE LUMPS AND FOAM SPOTS

   With slices the stock is dammed up and carried in a head on the wire, thereby resulting in much foaming. The Inlet mixes the stock and feeds it evenly onto the wire which helps to eliminate foaming and consequent lumps and foam spots.

3. MORE FORMATION SURFACE ON THE WIRE

   The usual long apron and slices are eliminated by the Voith Inlet. This gives additional forming and draining surface on the wire for the sheet and results in better paper.

4. WIRE GIVES LONGER SERVICE

   By doing away with slices it is unnecessary to build up a head of stock on the wire, thus saving wear and tear on the wire and insuring longer life.

5. CUMBERSOME DECKLE WASHING PANS ELIMINATED

   The Voith Inlet has a deckle washing device which washes the deckle at the point of the deckle pulley, thus omitting the cumbersome pans on the wet-end of the paper machine.

6. INLET EASY TO OPERATE

   Because it is easy to operate and adjust, it appeals strongly to machine tenders and the operating force in the mill.

7. THE PAPER MACHINE CAN BE SPEEDED UP

   When ample drying capacity is available, the patented Voith Inlet makes possible the speeding up of the machine, and increases production. In many mills this increase has amounted to ten per cent.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Ave.

Write Today for 20-Page Voith Inlet Booklet

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Philadelphia, Pa.—The Dill and Collins Company, Richmond and Tioga streets, has awarded a general contract to Schaefer & Co., 1600 Arch street, for the construction of a one-story addition to its mill, on the River Road, Manayunk.

Monroe, La.—The Morton C. Tuttle Company, Park Square Building, Boston, Mass., contractor for the proposed new addition to the local mill of the Brown Paper Mill Company, will proceed with work on initial units at an early date. The different structures will include a two-story machine and finishing room, 40 x 405 feet; three-story digester building, 36 x 55 feet; one-story recovery department 72 x 90 feet; one-story mud filter building, 38 x 55 feet; and one-story wash department, 54 x 73 feet. The entire project will cost close ot $1,000,000, including machinery. George F. Hardy, 309 Broadway, New York, is consulting engineer.

Lafayette, Ind.—The Haywood Tag Company, manufacturer of paper specialties, will soon take bids for the construction of a new one-story and basement building at Main and Seventh streets, to be 50 x 100 feet, and 45 x 120 feet, estimated to cost about $40,000. The structure will be used largely for storage and distributing service. Walter Scholer, Painters and Decorators Building, is architect. George H. Haywood, Jr., is president.

Rothschild, Wis.—The Marathon Paper Mills Company has superstructure in progress for its proposed new one-story and basement addition, 70 x 120 feet, to be used as a combination loading platform, train shed and garage building, estimated to cost about $32,000, with equipment. Orbison & Orbison, Appleton, Wis., are engineers.

Newark, N. J.—Wesley and Winter, Inc., 250 South street, manufacturer of paper specialties, has leased for a term of years the three-story and basement building at 90-6 Mechanic street, corner Lawrence street, and will remodel and improve for a new plant, to be equipped primarily for paper converting service. The estimated cost has not been announced.

Los Angeles, Cal.—The National Paper Products Company, San Francisco, has begun the construction of its proposed new mill at South Gate, to total about 120,000 square feet of floor space, to be used for the manufacture of corrugated paper, as well as boxes, containers, etc. The entire project is estimated to cost close to $400,000, with machinery. Contract was recently let to Barrett and Hilp, 918 Harrison street, San Francisco. J. D. Zellerbach is vice-president and general manager.

Atlanta, Ga.—The Corrugated Paper Company, 73 Stevens street, is arranging the early occupancy of a proposed new plant addition, now nearing completion, and will utilize for increase in output.

Menasha, Wis.—The Menasha Printing and Carton Company, River street, has awarded a number of miscellaneous contracts for the completion of its proposed new mill addition, for which foundations have been laid and superstructure is about to proceed, including structural steel to the Lakeside Brick and Steel Company, North Milwaukee; hollow tile and cement to the Ashland Salt, Lime and Cement Company, Ashland; steel sash, millwork, roofing, etc., for completion of structure. The C. R. Meyer and Sons Company, 50 State street, Oshkosh, is general contractor. The expansion will cost close to $50,000, with equipment.

London, Ont.—The East London Fibre Board Company is asking bids on general contract for the construction of a new addition to its plant in the East London district, estimated to cost close to $45,000, including equipment.

New Westminister, B. C.—The New Westminister Paper Company, Ltd., has arranged a bond issue of $175,000, to be used in part for the construction of its proposed new mill at Bellingham, Wash., to be operated by a subsidiary organization, recently organized, to be known as the Pacific Coast Paper Mills. The new plant is reported to cost close to $150,000. The parent company is also perfecting plans for the installation of additional equipment at its local mill, and will expend in all more than $250,000 in the expansion program.

Montreal, Que.—Plans are under way for the construction of a new news print mill in Quebec Province, according to Walter J. Donnelly, assistant trade commissioner, United States Department of Commerce, Montreal, to be equipped for an initial capacity of about 200 tons per day, and ultimate output of approximately 400 tons daily. It is understood that work will begin at an early date. From the same source, it is reported that another mill in this Province has arranged for the immediate construction of an addition to increase the capacity from about 700 tons of news print per days to 900 tons, with installation of two paper-making machines and auxiliary equipment. Information at the office of the Bureau of Foreign and Domestic Commerce, Washington, D. C., under Reserved Information, Canada, No. 44,103.

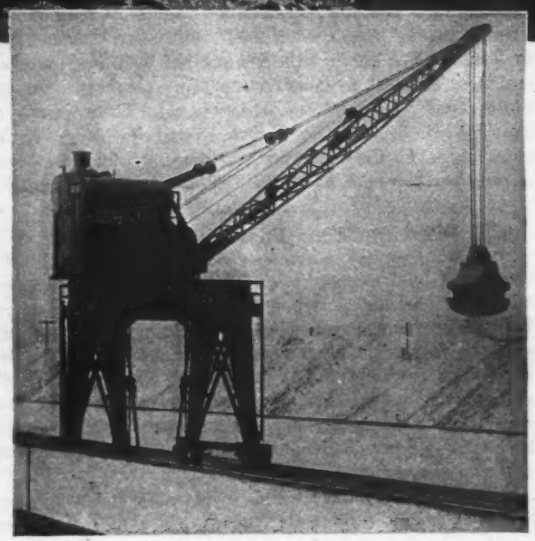
Victoria, B. C.—The Sidney Roofing and Paper Company, Ltd., has filed plans for its proposed new plant addition, estimated to cost about $100,000, with equipment. A list of machinery to be installed will soon be arranged.

Midland, Ont.—The International Fibre Board Company has authorized plans for the immediate rebuilding of the portion of its mill recently destroyed by fire, and will rush the structure to completion. The work is reported to cost more than $45,000. Additional equipment will be installed for replacements.

Melbourne, Australia—A paper company in the southern Tasmania district is perfecting plans for the construction of a new experimental paper mill at Geeveston, Huon district, estimated to cost more than $125,000, with equipment. The unit will be equipped for pulp production and paper making and will be supplementary to a proposed large mill in this section, if operations prove successful. Information at the office of the Bureau of Foreign and Domestic Commerce, Washington, D. C., under Reserved Information, Australia, No. 35X; also, at the American Consulate, Melbourne, J. B. Foster, assistant trade commissioner.

New Companies

New York, N. Y.—The Moliterno Paper Stock Company has been incorporated with nominal capital of $5,000, to manufacture and deal in paper products. The incorporators are S. C.



900 Tons of Sulphur handled hourly

Down along the Gulf at Pier 35, Brownhoist Crane No. 9254—the ninth purchased by a large southern sulphur company—is working night and day to keep abreast with the tremendously increased demand for sulphur.

On the same pier two similar Brownhoists, both five years old, have been handling 600 tons of sulphur an hour and working 22 to 24 hours a day. Crane 9254 increases this dock's capacity to 900 tons hourly or can be used as an auxiliary to the two cranes.

This company's Brownhoists, the oldest of which has been in use over 7 years, range from 10 to 40 tons capacity. All are used for sulphur handling but they would be equally speedy and dependable for handling coal, sand, stone, etc., with bucket, or on hook block or magnet work.

The three Brownhoists at Pier 35 are the same type and size as the crane pictured above in the smaller illustration. They have a capacity of 40 tons and are equipped with 54-cu. ft. Brownhoist link-type buckets.

The top illustration shows two No. 4 Brownhoists of 20 tons capacity handling sulphur with 54-cu. ft. Brownhoist link-type buckets.

Tell us the kind of work you do and we'll be glad to send you information on the right size and type of crane for your job.

The Brown Hoisting Machinery Company, *Cleveland, Ohio*

Branch Offices: New York, Chicago, Pittsburgh, New Orleans and San Francisco

BROWNHOIST

GOOD MATERIAL HANDLING MACHINERY

Jaffe and H. J. Golden. The company is represented by Raimo, Brugnoli, Russo and Frasca, 299 Broadway, New York.

Passaic, N. J.—The Victory Paper Box Company has been incorporated with capital of $50,000, to manufacture and deal in paper boxes and containers. The incorporators are Henry and E. Tobin, and Isadore Kaminsky, 751 Main avenue, Passaic. The last noted is representative.

Waukegan, Ill.—The American Mills Supply Company, 11 Terminal Building, has been incorporated with capital of $50,000, to deal in paper products, etc. The incorporators are Markus Shapiro and M. Gordon. The company is represented by Runyard and Behanna, Waukegan.

Utica, N. Y.—The Northern Paper Mills Company, has been incorporated with capital of 100 shares of stock, no par value, to manufacture and deal in paper specialties. The incorporators are W. C. Young and L. W. Ferris. The company is represented by Dumore, Ferris and Dewey, Utica.

Greenwich, N. Y.—The Phoenix Paper Mills, Inc., has been incorporated with capital of $5,000 to manufacture and deal in paper specialties. The incorporators are A. H. Wilcox, E. S. Baker and B. Hyatt. Representative: H. Van Kirk, Greenwich.

Penn Yan, N. Y.—W. H. Fox & Sons has been incorporated with capital of $300,000, to manufacture paper products. The incorporators are F. J. Stoltz and J. W. Little. The company is represented by H. R. Frost, 56 Church street, New York, N. Y.

Atlanta, Ga.—The Crown Paper Company has filed notice of increase in capital from $303,000 to $328,000, for expansion.

Mill Superintendent Passes Opportunities

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 19, 1926.—How August Gustin, paper mill superintendent at Oconto Falls, Wis., passed up opportunities to make millions is told in an article appearing recently in one of the Milwaukee newspapers. Mr. Gustin, says the article, is the man who originated the process by which hemlock was made suitable for the making of pulp. He gained his first experience while a co-partner in laboratories in Austria of Dr. Karl Kellner, a pioneer in the development of the sulphite process for treatment of wood pulp.

The hemlock discovery came while he was head of a pulp plant at Port Huron, Mich., in the early nineties, according to the story that is told. The first carload of hemlock pulp was shipped to a mill at Kaukauna, Wis., and shipments were made there for six months before the fact was revealed that spruce had not been used. A check then was sent the mill owner for the difference in cost between hemlock and spruce, and from that time on hemlock has been used extensively.

Mr. Gustin is also credited with discovering a kraft paper making process which he allowed a number of Wisconsin mills to adopt without patenting his idea. He declares that he left his process unpatented because he preferred to be superintendent of a mill than a capitalist, and was satisfied with the income he is able to obtain in his present status. The spruce supply is practically gone and the hemlock will last about fifteen years, Mr. Gustin says.

Menasha Paper Mill to Begin Operations

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 19, 1926.—With the purchase of 2,000 tons of straw, the newly organized Menasha Paper Mills Company, Menasha, Wis., will soon start operations. The defunct mill of the Island Paper Company, purchased by the new corporation, will devote its main production to straw board and is gathering material for this purpose. The purchases are being made from farmers by Mayor J. H. Dennhardt, of Neenah, Wis, and George J. Mayer of Menasha. At least 6,000 tons of straw will be bought this fall in Wisconsin, Minnesota and the Dakotas. It has been found necessary to send baling machines into a number of localities that have none, so that the production can be prepared for shipment.

Obituary

Robert W. Day

[FROM OUR REGULAR CORRESPONDENT]

SPRINGFIELD, Mass., November 23, 1926.—Robert W. Day, 74 First Vice President of the United States Envelope Company, of which his brother, William O. Day, is president, died Thursday morning at the Chapin Memorial Hospital, after a ten days illness. He was born in Springfield, February, 1852, son of William Waite Day and Eunice R. (Russell) Day. His father was a machinist.

Mr. Day graduated from the Springfield High School in 1872 and then entered the employ of the Morgan Envelope Company, and gradually worked his way up, until in 1884 he was made treasurer of the company. When the envelope companies of this section were merged into the United States Envelope Company, he was made first vice president. He was also a director of the United States Stamped Envelope Company, of Hartford, Conn., president of the United Electric Light Company, and president of the Indian Orchard Company.

Mr. Day was a member of the Golden Rule lodge of Masons, of Hinsdale, N. H.; Springfield Commandery Knights Templar; Springfield Club; Colony Club, and Springfield Country Club. He married, September 26, 1877, Miss Ida L. Boyden, of Hinsdale, N. H. He leaves his widow, a daughter, Mrs. Pauline Meals, wife of Major Charles A. Meals of the United States army, now stationed at Fort Leavenworth, Kan., and three sons, Robert F. Day of the United States Envelope Company, Winsor B. Day of Tifft Brothers, and Morgan G. Day, of the Indian Orchard Company.

He also leaves a brother, William O. Day, Treasurer of the United States Envelope Company, and a sister, Mrs. Clara Berry of this city.

The funeral was held Saturday afternoon at the South Congregational Church, the Rev. James Gordon Gilkey officiating, and the burial was in Springfield cemetery.

Mrs. Edwin C. Robertson

HINSDALE, N. J., November 13, 1926.—Mrs. Rose (Richmond) Robertson, 72, widow of Edwin C. Robertson, well-known paper manufacturer of this town, died at her home yesterday, November 12. She had been in ill health for many years. Mrs. Robertson leaves one son, Winfred F. Robertson, of this town, who succeeded his father as president of the Robertson Company.

Plan Farewell Reception for Superintendent Walker

[FROM OUR REGULAR CORRESPONDENT]

CORINTH, N. Y., November 20, 1926.—Charles W Walker, superintendent of the Hudson River Mill of the International Paper Company for the past fourteen years, whose appointment as manager of the I. P. Mill at Three Rivers, Quebec, was announced recently, has delayed his departure for Canada in order to clean up a number of matters at the local plant before turning it over to his successor.

Just when Mr. Walker will leave to assume the management of the Three Rivers Mill is not known definitely. The Three Rivers plant is one of the largest news print units of the I. P. chain of mills and Mr. Walker's selection as manager of the plant is said to have been influenced by his successful administration of the local plant which prior to the establishment of the Three Rivers Mill was the I. P. Company's largest news print mill.

A farewell reception to be participated in by all employes and officials of the Hudson River Mill is to be tendered Mr. Walker before his departure. Committees have been appointed and are now at work on plans for the reception although no date has been definitely fixed for the affair as yet. Superintendent Walker is extremely popular with the men under him at the local plant.

New York Trade Jottings

E. P. Strong, secretary, Munising Paper Company, Munising, Mich., was a New York visitor this week.

* * *

The Forest Paper Company have removed from 78 Duane street to larger and more convenient premises at 334 Hudson street, New York.

* * *

R. A. McInnis, general manager of the Anglo-Canadian Pulp and Paper Mills, is in New York. Mr. McInnis is putting up at the Hotel Roosevelt.

* * *

G. P. Genberg, technical director of Fraser Companies, Ltd., Edmundston, N. B., and Fraser Paper, Ltd., Madawaska, Me., spent a few days in town this week.

* * *

The Waterfalls Paper Mills, Inc., A. Olafsen, president and treasurer, 200 Fifth avenue, manufacturers of bond, ledger and cover paper, have been elected to membership of the Merchants Association of New York.

* * *

O. M. Porter and D. A. Crocker, of the American Paper and Pulp Association, attended a recent meeting of the New York Forest Club, at which consideration was given to the development of a forest policy for the State of New York and progress in utilization as a phase of forest management.

* * *

The Texas Gulf Sulphur net earnings in October were $985,000, a new high record, on 2,540,000 shares of stock outstanding. It is estimated that net for the last quarter will run well above $3,000,000. Since it began producing, six years ago, Texas Gulf Sulphur has earned $32,644,000, and paid out in dividends $23,177,000.

* * *

Seymour N. Sears, president of the National Council of Travelling Salesmen's Association, was the principal speaker at a meeting of the New York Division of the Salesmen's Association of the Paper Industry last Monday. Mr. Sears' discussion centered around the organization and work of the National Council, and was of great interest to the salesmen present.

* * *

Under the auspices of the Wrapping Paper Manufacturers Service Bureau, of 53 Park Place, New York, a committee has prepared and published a "Compilation of Trade Customs in Fourdrinier Wrapping Paper: Krafts, Manilas, Fibres, and Bogus," bearing date of November 1, 1926, which may be procured from the Bureau at a nominal price of 2 cents per copy, prepaid.

* * *

E. A. Stone has resigned from the active management of the business of The Stone Bros. Company, effective December 1, and has established himself in association with H. P. Brock under the corporate name of The E. A. Stone Company, which corporation will conduct a business of woolen and cotton rags of all descriptions at 67 West 44th Street, New York.

* * *

M. Gottesman & Co., Inc., wood pulp and paper merchants, 18 East 41st street, New York City, announce that on or about November 27, 1926, they will have a new series of telephone numbers commencing with Lexington 2240. This change was brought about by the need of additional telephone facilities which could not be supplied by the old exchange owing to the enormous growth of the midtown section of New York. M. Gottesman & Co. were established in 1886 and have occupied quarters at their present address since 1914, being one of the first of the firms associated with the pulp and paper industry to move to the 42nd street district.

* * *

Decision to conduct a preliminary container and packing survey in two stores, one in Manhattan and the other in Brooklyn, was arrived at recently at a meeting of the Traffic Group of the National Retail Dry Goods Association. The survey, which will be conducted for about six weeks, will, it is believed, afford the necessary data for definite recommendations to be made later. Four divisions of the matter will be surveyed. First, attention will be given to the shipping containers reaching the store. Whether fiber or corrugated board is better than wood in effecting large savings in freight costs will be studied. The working out of unit packing so that a store can sell from sample and ship direct from stock without expensive repacking is next. Third is the matter of economies in shipments from the store to the consumer. Finally, study will be given to possible savings in store shipping supplies, including wrapping paper, folding boxes, twine, etc., and suitable standards set up.

* * *

There was a special meeting of the Paper Stock Division of the National Association of Waste Material Dealers, Inc., held at the Hotel Astor, New York, recently, to consider the rates on Waste Paper in Official Classification territory. A proposal filed by one of the western mills is pending before the carriers looking toward a reduction in the rates on waste paper from eastern to western points. The eastern people felt that the rates to western territory should be reduced. Competitive and commercial conditions made it necessary for the association to look into the matter carefully and as they have felt for some time that the rates on waste paper are too high when compared with the rates on the manufactured boards and roofing it was decided at the meeting that the traffic department should endeavor to have the rates on waste paper reduced, which means that efforts will be made to secure a reduction in Central Freight Association rates relative with the reduction asked from eastern to western points.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 23, 1926.—The Government Printing Office has received the following bids for 36,000 pounds of various sizes binders board: Whitaker Paper Company, at $68.00 per ton; Mathers-Lamm Paper Company, $67.48; Barton, Duer & Koch Paper Company, $68.65; and Dobler & Mudge, $67.50.

The following bids were also received for 108,000 pounds of 21x32—72 white sulphate writing paper and 11,550 pounds of same 26x34½—77: International Paper Company, 6.5 cents per pound; R. P. Andrews Paper Company, 6.85 cents; Mathers-Lamm Paper Company, 9 cents; Barton, Duer & Koch Company, 6.5 cents; Virginia Paper Company, 7.405 cents; Whitaker Paper Company, 7.25 cents; American Writing Paper Company, 7.75 cents; Reese & Reese, 7.85 cents; Dobler & Mudge, 6.5 cents less 1 per cent. Lindemeyr & Harker, 7.45 cents; T. A. Cantwell & Company, 7.5 cents; R. C. Osborn & Company, Inc., 7.22 cents; and Old Dominion Paper Company, 7.99 cents.

The Government Printing Office has also received the following bids for 40,000 pounds of various sizes chip board: Whitaker Paper Company, at $38.80 per ton; R. P. Andrews Paper Company, at $44.50; Mathers-Lamm Paper Company, at $37.25; Barton, Duer and Koch Paper Company, at $38.85; T. A. Cantwell & Co., at $41.75, and $40.40; Dobler & Mudge, at $40.00; Lindemeyr & Harker, $39.85 and $46.00; Philip Rudolph & Son, Inc., $41.65; United Paperboard Company, Inc., $39.00; The La Boiteaux Company, $37.50; and Reese & Reese, $36.72.

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BUSINESS CONDITIONS SOUND

"Present business conditions are sound, and indications are that industrial and commercial activity on the whole will continue at a satisfactory momentum, as far as the immediate future is concerned." That is the composite judgment of leading industrial and financial executives of the country, on the basis of October reports, obtained in conferences on the business outlook and weighed in the light of recent business trends by the National Industrial Conference Board.

Increasing stability is the outstanding characteristic of business development during the past five years, according to the Conference Board's analysis of conditions, and the achievement of this condition is ascribed in large measure to the improved technique of distribution, the better organization of our credit and transportation systems, the steadying influence of the Federal Reserve system, and to better informed and hence more alert industrial and business management.

"Ignorance of general business trends, misinformation and decisions based on unsubstantiated opinions and the lack of a proper national banking system, such as we now have in the Federal Reserve banks, have been mostly responsible for the severity of the depressions of the past," is the comment of Magnus W. Alexander, president of the National Industrial Conference Board. "The widely diffused, better and more prompt factual information regarding industrial and commercial conditions at the present and improved credit facilities," he declared, "are proving a powerful factor in leveling peaks and depressions and also in forestalling panics."

"Present day knowledge is such that there should be no further business panics," a widely known industrialist says in corroboration of this view. "If we have any more business panics, they will be man-made rather than unavoidable events." That, however, Mr. Alexander cautions, does not mean that American business has discovered a fool-proof formula for permanent prosperity, but only that by rationalizing production and trade, the disturbing phenomena of over-expansion and resulting depressions may be minimized so as to remain reasonably within control, as it were.

Characteristic of the new orientation of business is the emphasis placed by the Conference Board on the importance of a prosperous working class. The generally accepted view, that good labor conditions depend on good business conditions, is characterized by one member of the Board as superficial. "The reverse is true," according to this industrialist; "it is the experience of myself and of my associates in our industry that good business conditions are based upon good labor conditions."

It is pointed out as significant by the Conference Board that business activity has not diminished but rather increased with the tendency of declining prices underway during the current year. The lower prices, according to Mr. Alexander, are a symptom of greater economy in production and distribution and of credit economies and, together with the prevailing high wage levels, have resulted in the United States in the highest purchasing power of wage earnings ever known. "Real weekly earnings" are now about 29 per cent higher than in 1914, 9 per cent higher than in 1920, and nearly one per cent higher than a year ago.

While there has been an obvious continued increase in business activity and production during the past few years, and an apparent increase in consumption power closely paralleling that of production, the Board cautions that it must not be forgotten that new records of total production, transportation and sales do not necessarily reflect increased business activity per capita, but are due in large measure to the natural growth of our industries and commerce resulting from population increase. This natural increase in the total volume of business is estimated by the Board as amounting to from 3 to 4 per cent annually at the present period of time.

No major signs of decline were found in the volume of production, which in August of this year was 11 per cent higher than in the same month last year, and 17 per cent above the 1919 average, which was the peak of war activity. Consumption of electrical power, which closely parellels the movement of production volume, last August was 15 per cent greater than in the same month a year ago.

That this volume of production is being distributed as a fairly even flow is reflected in the increasing volume of railroad traffic, total ton mileage of all railroads for the first seven months of the current year showing a 7½ per cent increase over the corresponding period in 1925. Railroad earnings for the first half of the year show an 11 per cent increase over the corresponding period of the previous year. Goods apparently went into the consumers' hands at approximately the same pace, retail trade as measured by the turnover in department stores, chain stores and other retail establishments having increased from 8 to 10 per cent since last year.

Bank rates, although slightly higher than a year ago, are not so high as to hamper legitimate enterprise, the Board finds, current rates being about the same as the general average before the Federal Reserve system was organized. While there has been an approximate increase of $200,000,000 in commercial loans as reported by Reserve member banks, an increase of about $400,000,000 in loans on bonds and stocks and of about $100,000,000 in investments during the year, this total expansion of approximately $700,000,000 in bank credits has required not more than about $15,000,000 additional of reserve funds. This, according to the Board, reflects the greater utilization of time as against demand loans, and the more even flow of manufactured goods resulting in smaller inventories.

Cost Meeting at Springfield, Mass.

The Connecticut Valley Division of the Cost Association of the Paper Industry held its second seasonal meeting at the Highlands Hotel, Springfield, Mass., on Wednesday, November 17. The meeting was held jointly with the N. A. C. A., there being about ninety present.

The scheduled speaker, H. N. Sweet, was unfortunately unable to be present, his place being taken by W. S. Kemp, treasurer of the Holtzer-Cabot Electric Company, Boston, Mass., who spoke on the subject of "Budgets." Having consented to speak at very short notice, Mr. Kemp had not prepared a written paper.

The following is a summary of his remarks: His company makes up its budget approximately three months ahead, and it is based on the business trend and a survey made by their salesmen among the trade. If they expect a quiet period or a falling off has been forecast, it is customary for them to take the following three steps to prepare for the falling off in business—

1—Purchases are cut down, thereby reducing inventories.

2—Working days are reduced, and, if necessary, direct labor also, by putting the factory employees on short time.

3—Overhead expenses are also curtailed by limiting the amount of clerical help and their indirect labor, and if extremely poor business is encountered, the salary of all officers, from the president down, are reduced. Curtailment is also made in sales expenditures, including advertising.

Following Mr. Kemp's address, a number of questions were asked, the discussion after the talk lasting for nearly an hour.

Both member and non-member mills of the Cost Association of the Paper Industry located in the vicinity of the Connecticut Valley, are invited to send representatives to these meetings. The local secretary is J. E. Barrett, American Writing Paper Company, Holyoke; Mass. If those desiring to receive notices about future meetings will write Mr. Barrett, he will be glad to add their names to his mailing list.

Union Watermarked Campaign

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., November 20, 1926.—The campaign to stimulate the use of union watermarked paper which has been under way for several months, has been highly successful, according to officials of the International Brotherhood of Papermakers, with headquarters in this city. Brotherhood officials have been co-operating with Edward S. Alden, of the Alden Paper Company, Holyoke, Mass., who is the official sales agent for union watermarked paper. The results of the campaign are noticeable in the increased production of mills which have been licensed to manufacture the watermarked paper.

According to word from Brotherhood headquarters here the Unity Paper Company, in Potsdam is now turning out the union watermarked paper at the rate of more than two hundred tons a month and somewhat smaller amounts are being produced at the mills of the American Writing Paper Company, in Holyoke, Mass., and the Hopper Paper Company, of Taylorville, Ill. According to W. R. Smith, president of the Brotherhood, an intensive sales campaign which will be prosecuted throughout the United States is looked for to bring a still greater increase in production of this type of paper.

Safety Campaigns in Wisconsin Mills

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 19, 1926.—Active campaigns in safety among Wisconsin paper mills have meant much to the National Safety Council, reports emanating from the recent convention in Detroit, Mich., have shown. Wisconsin had one of the largest delegations, with sixtey men present, and this is attributed to the extent of the safety work here. The major awards given this state also resulted from this interest. There is no doubt but what Wisconsin will continue its aggressive campaigns for safety and enlarge the scope of the work. Among those who will lead in the activities are Judson G. Rosebush, president of the Northern Paper Mills, Green Bay, Wis., who was elected a director of the National Safety Council; W. J. Peacock, personnel director of the Northern Paper mills, and chairman of the paper and pulp section of the national council; Amiel Umberham, of the Fort Howard Paper Company, Green Bay, Wis., secretary of the pulp and paper section, and M. G. Hoyman, of the prize winning Kimberly-Clark Company, Neenah, Wis., and a first vice president of the paper section of the council.

Connecticut Valley Superintendents Meet

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., November 23, 1926.—The annual business meeting and election of officers of the Connecticut Valley Division of the American Pulp and Paper Mills Superintendents Association was held Saturday night at the Hotel Nonotuck following an informal dinner, about thirty attending. Plans were talked over of holding a big meeting in January but the time and place were not settled upon. These officers were elected: Chairman, Charles N. Mooney, of the Smith Paper Company; First Vice Chairman, Charles C. Stewart, of the Collins Manufacturing Company; Second Vice Chairman, E. J. McDonnell, of the American Writing Paper Company; Third Vice Chairman, Lewis E. Weiser, of the National Folding Box Company; Secretary-Treasurer, C. A. Tifft, of the Chemical Paper Manufacturing Company; Board of Directors, Thomas Rogan, John J. White, William B. Clements, Roger McCorkindale, Joseph Bario, Michael Kelley and E. J. Gibbons.

Acquisition to American Writing Staff

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., November 23, 1926.—L. C. Reynolds, formerly with the General Electric Company, has been engaged as executive engineer and assistant to the president of the American Writing Paper Company, Sidney L. Willson. Mr. Reynolds, who for a number of years held an executive position with the General Electric Company, and was more recently connected with the Elliott-Fisher Company, has had splendid background for the many duties incumbent upon his association with the American organization. The appointment of Mr. Reynolds is taken to signify one of the first steps in the reorganization of the company and to indicate a policy of bringing the organization to the fore in technical matters. Mr. Reynolds who has already assumed his new duties, will maintain an office in the general offices of the company in the Flatiron Building here. He is a graduate of Union College of Schenectady, N. Y., and has specialized in industrial engineering.

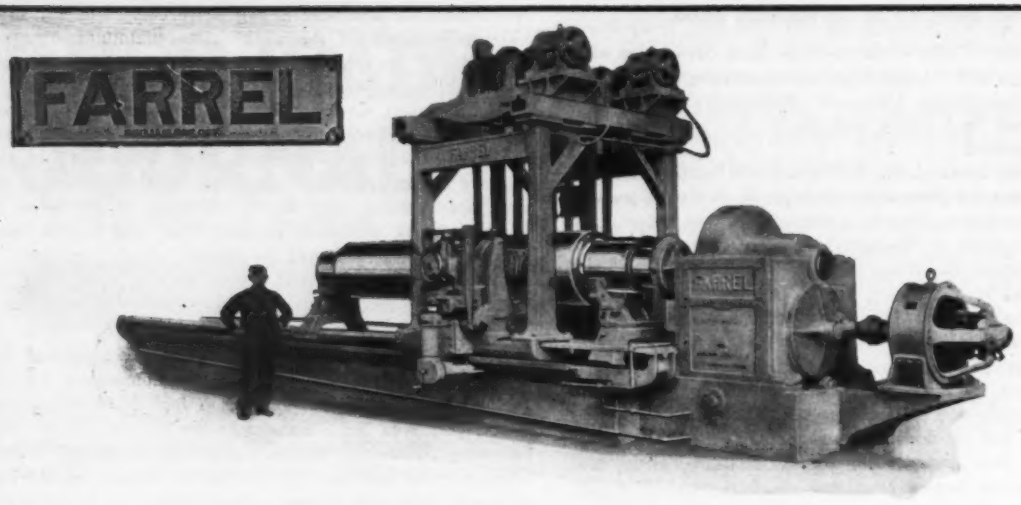
Fox River Valley Paper and Pulp Lectures

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 19, 1926.—A series of lectures, one a month, has been arranged for all paper mill employes of the Fox River Valley by the Vocational school at Appleton, Wis. This plan was announced by H. G. Noyes, who is in charge of the paper and pulp making courses now being taught in the evening schools there. Motion picture films from the United States Forest Products Laboratory, Madison, Wis., will be included in the series, and experts in several phases of paper and pulp manufacture will be called in to give talks.

Forthcoming Association Meetings

The American Waxed Paper Association and the National Association of Gummed Tape Manufacturers are meeting in Chicago on December 8, the Glazed and Fancy Paper Manufacturers Association in Providence, R. I., on December 7, and the Binders Board Manufacturers Association in New York on November 30.



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AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

The Keebra Process*

By James d'A. Clark

The advent of the Keebra process has given the pulp maker a further means of obtaining a pulp with different characteristics. The full Keebra process consists of the digestion of wood or other raw material in a neutral or slightly alkaline solution of sodium monosulphite Na_2SO_3. With hemlock or spruce the resultant pulp has a color approaching that of unbleached sulphite and with other woods, like the poplar, the pulp has a color which compares very favourably with a fairly well bleached pulp.

Apparently sodium sulphite has very little action on the more easily resolvable celluloses, and their presence causes the high yield and, at the same time, a harder and stronger pulp.

The cooking process is a very simple one, as it is almost impossible to do any real damage to the pulp by over-cooking. In one case observed by the writer, a digester of spruce was given an over-charge of chemical and digested for more than the required period, as it was a preliminary cook in a new mill. When the time came for blowing, owing to a defect in the equipment, this could not be done, and, after two or three unsuccessful attempts, when the pressure in the digester was raised for the purpose, the digester was finally blown some 70 hours after the cook had been started. The pulp showed little difference from that from the following cook, which was conducted without mishap.

Fiber Qualities of Full Keebra Pulp

Long fibered pulps by this process rival kraft in strength, and, notwithstanding the hardness of the paper, the tear and folding properties are abnormally high. They will bleach as a very easy bleaching sulphite requiring 10 to 15 per cent. total bleach. Short fibered woods like poplar, need only 6 to 10 per cent. Exception, however, is made in the case of jack pine, which gives a light yellow brown pulp, which is almost impossible to bleach economically. This latter pulp makes up into a splendid manila envelope. The long fibered bleached spruce or hemlock is somewhat too hard for exclusive use in the majority of papers, but it can be used to take the place of sulphite pulp in a furnish, and a lower percentage will give the required strength. Unbleached full Keebra long fibered pulp could with advantage be used to replace sulphite in a news print furnish and a lower percentage would be required. The short fibered pulp is a little harder, stronger, and more transparent than soda. It can be made up into a satisfactory sheet by itself without the addition of any long fibered pulps. It is a very good pulp to use for heavily loaded imitation arts and similar papers, as it will carry all the loading possible and yet remain firm and strong. By itself, full Keebra pulp makes up into an excellent paper for player piano rolls and similar specialties.

Unfortunately, up to the present time, the recovery and reuse of the liquor has not been demonstrated to be practical if the full Keebra process is used by itself. However, if a proportion of "semi-Keebra" cooks are made at the same time, there are no difficulties in recovering the two liquors together. As in any case it is hardly conceivable that any mill would wish to make its whole output full Keebra pulp exclusively, in practice this difficulty does not amount to much.

Semi-Keebra Pulp

Semi-Keebra pulp has characteristics between soda and full Keebra pulps. It is made by digesting the raw material in a liquor consisting of caustic soda with a percentage of sodium sulphite. The yield is higher, due to the protective action of the sulphite, and in the case of wood the pulp is more easily bleached. By using about 20 per cent. of the soda liquor as sodium sulphite an American mill which has used this process continually and exclusively for the past two years, is satisfied that an 8 per cent increase in yield is obtained, and less bleach is used. As the pulp is a little harder and stronger than soda pulp the percentage of sulphite ordinarily used is cut down, so that with a bigger percentage of shorter fibers a better finished and more closely formed sheet is made than before.

As any kind of wood can be suitably dealt with by either of these processes, for a mill making a large variety of specialty and other papers, a combined sulphate, soda and Keebra mill is a useful asset, and a larger variety of pulps can be made and different kinds of raw materials used than with any other equipment.

Liquor Plant

For a 50-ton per day mill, a 16 x 4 ft. rotary sulphur burner is sufficient to give the full quantity of sodium sulphite liquor for any proportions of full and semi-Keebra cooks. The full Keebra process requires about 450 lb. of sulphur per ton, and the semi-Keebra process about 75 lb. consequently, if the semi-Keebra process is used exclusively, it will only be necessary to work the burner 8 hours or less per day. The above burner is capable of burning 10 tons of sulphur per twenty-four hours. As with

*The Keebra Process is the seventh installment in a series of articles by J. d'A. Clark on pulp and paper manufacture in North America, being published in World's Paper Trade Review.

Mr. Clark is a graduate in mechanical engineering of the University of London and was awarded the Sir Robert Blair Fellowship for 1925. Having had some experience in paper manufacture in England, he decided to spend the year in Canada and the United States, making a study of American practice. His articles are based on his experience and observations while here.

As Mr. Clark was for several months at Canada Paper Company, Windsor Mills, Que., where the Keebra process is understood to be used, he had an excellent opportunity to study it.

the sulphite process, a combustion chamber and cooler are necessary, but in this case, as it is advisable to have the SO_2 gas as hot as possible for passing through the absorption tower, since there is no danger of incomplete absorption, so a modified gas cooler is all that is required. About 120 feet of 8 in. cast-iron pipe with 4 in. parallel in a water trough is sufficient. Very little water is necessary. The absorption tower may be about 35 ft. effective height, and about 20 sq. ft. in area. It is constructed of longleaf pine or else of reinforced concrete with an acid-proof tile lining, and the interior filled with wood blocks to break up the liquor. The level of the bottom of the tower is a little higher than the top of the sulphited liquor tanks, so that the liquor can flow from the tower into them. The SO_2 gas enters the tower at the bottom and is withdrawn at the top through a lead or wooden duct to a 12 in. lead gas fan, and discharged through a wooden pipe into the air. A better arrangement, if convenient, is to have a direct-coupled fan at the top of the tower. This fan supplies the draft for the sulphur burner, the vacuum being normally about ¼ in. to 1 in. water in gas cooler. The burner gas is about 14 per cent SO_2. The carbonate liquor to be sulphited is stored in the two liquor tanks at the base of the tower, and these are constructed of wood or of concrete with an acid-proof lining, and equipped with agitators. Cast-iron agitators are good enough for this job, as it is only by accident that the liquor gets slightly acid, when it is corrected at once. A 4 in. centrifugal pump, which is preferably acid-proof, draws the liquor from either of the two tanks and pumps it up to the top of the tower, when it trickles down the blocks and absorbs the upcoming SO_2 gas. The liquor runs out of the bottom of the tower through a wooden spout, which leads it to the tank being circulated. The size of the tanks is unimportant, but they should be of at least such a size as to furnish enough liquor for one digester charge with liquor at about 10 lb. of Na_2CO_3 per cubic foot. When practically all the carbonate in one tank is converted to sulphite, as determined by an acid titration, the gates and valves are switched over and the sulphiting of the other tank proceeded with. The finished tank, after being checked for sulphite and carbonate, is pumped to storage, and is then refilled with carbonate liquor. The completed liquor should be slightly alkaline, and may be stored with safety in ordinary cast-iron or steel-plate tanks. The rest of the process and equipment is exactly as for the ordinary soda, or, if smelters are used, the ordinary sulphate mill.

Digester Charge for Semi-Keebra Cook

For a semi-Keebra cook, caustic liquor in the required quantity is run into the digesters as they are being filled with chips, together with a predetermined amount of sodium sulphite, which should be from 20 to 30 per cent of the total soda present. The following figures taken from practice indicate the charges required. The figures are for poplar, and are given as pounds Na_2O per cord of wood.

Mill	1	2	3
NaOH	2.60	2.38	3.50
Na_2S	1.06	.95	.13
Na_2SO_3	.81	.57	.74
Cubic ft. of liquor	106	130	120
Pressure, lb./sq. in.	120	120	90
Total cooking time, hr.	5½	6	5½
Percentage bleach	10	12	9

Mill 3 did not use black liquor for making up the digester charge. Mill 1 heated the black ash in the incinerator very highly, which was almost equivalent to smelting. Mill 2 used smelters, and Mill 3 burned the black ash with little heat in the ordinary way.

Full Keebra Cook

For a full Keebra cook, the required quantity of sulphtie liquor is run in alone. The following figures, also taken from practice, indicate the conditions. Figures are given as lb. Na_2O per cord:—

Easy bleaching, spruce and hemlock—400 lb., 8 hours at 150 lb. sq. in.

Jack pine wrapping—430 lb., 7 hours at 150 lb. sq. in.

Easy bleaching, poplar—360 lb., 7 hours at 140 lb. sq. in.

No gas is given off during the cooking, so there is no relieving necessary apart from letting out the air and helping the circulation as for an ordinary soda cook.

When the digestion is completed as determined either by experience or else with a sampling device, the digester is blown and the pulp washed.

Reuse of Black Liquor

Unless the colour of the pulp is not important, black liquor from a semi-Keebra cook should not be reused if it can be avoided, as the pulp is made darker and requires more bleach. Where a full Keebra cook is concerned, however, as much as possible of the black liquor should be used over again, as a diluent, as it has absolutely no effect on the color of the pulp, it saves evaporation, and also furnishes an appreciable quantity of active chemicals. The remainder of the black liquor from either process is evaporated and recovered in the usual manner as for a soda or sulphate cook. If a smelter is used or the rotary incinerator strongly heated, the sulphur contents of the liquor tends to form sodium sulphides with the soda, and whilst sodium sulphide is usable with profit in a liquor for cooking, it is difficult to deal with in the sulphiting systems.

If it is attempted to use the full Keebra process exclusively it becomes necessary to sulphite the whole of the green liquor, and in the tower any sulphides coming into contact with the SO_2 gas go through a complicated chemical reaction, the results of which are partially determined by the temperature of the reaction and the percentages of the various chemicals present, but the main product formed is sodium thiosulphate and, in addition, small quantities of sodium sulphite and sulphuretted hydrogen. The sodium thiosulphate is worse than useless as a cooking agent in commercial practice, and it, together with the other complex products formed, slows up the action of the chemicals on the wood, and also causes the pulp to be stained black. Consequently it is essential to keep the sodium thiosulphate content of the cooking liquor as low as possible, and this is made more difficult by reason of the sodium thiosulphate continually accumulating in the system if the sulphiting of a liquor with a high percentage of sulphides is persisted on. Thus, at present, a mill working with full Keebra cooks exclusively, is impracticable. Using both processes, however, it is easy to arrange the working of the pulp mill to prevent these difficulties, and, normally, no trouble of this description is experienced.

Liquor Recovery

Where the semi-Keebra process is worked exclusively, the black liquor is evaporated in the usual way, using smelters or not, and the liquor used for sulphiting is made up of fresh soda ash corresponding to the losses in the system which may amount to from 10 to 25 per cent of the total soda used. If the recovery is greater than 80 per cent, it is not possbile to use sufficient fresh soda ash for sulphiting, so in this case as well as usnig the make-up soda, a certain amount of green liquor from the recovery system is mixed with it, and sulphiting proceeded with as usual. The percentage of sodium sulphide in the liquor for sulphiting should not exceed 12 per cent of the total soda present. This will normally give about 5 per cent of the total soda as sodium thiosulphate, which is about the limit. These conditions obtain in a mill using recovered green liquor to the extent of 60 per cent of the sulphiting liquor, and this gives a sufficient percentage of sodium sulphite to run nearly two-thirds of all the cooks full Keebra, and the rest semi-Keebra, it is clear that in working the semi-Keebra process alone there are no difficulties whatever in obtaining sufficient liquor suitable for sulphiting, however high the recovery.

Combined Process an Advantage

When using both the full and the semi-Keebra processes in conjunction, all the black liquor possible from the full Keebra is reused as a diluent for the cooking liquors for both the full and semi-Keebra cooks. This is a great advantage over the usual soda process, as it saves evaporation of part of the liquor. In

order to use as much as possible, it is necessary to keep the caustic liquors and sulphiting liquors as strong as possible, but it is not advisable to proceed much beyond 6.5 lb. total Na_2O per cubic foot in the sulphiting liquor in case crystallization occurs, nor 6.5 lb. per cubic foot of Na_2O in the liquor to be causticized or the causticity is too much lowered. Nevertheless, using 7.2 lb. Na_2O per cubic foot in the liquor to be causticized and 58 per cent CaO for the Na_2CO_3 present (figured as carbonate), a causticity of 83 per cent has been obtained. The strength of this liquor was about 30 degrees Tw. The liquor from the full Keebra cooks with wood is not black, but a very dark red, similar to the colour of dried blood. The liquor from the semi-Keebra cooks is black as for soda, and, as has already been stated, it should not be reused if an easy bleaching pulp is desired.

In an extreme case the only limiting condition of the reuse of full Keebra black liquor is the thiosulphate content, which must be kept low, so that the total thiosulphate content in the digester fully charged with the fresh liquor and the black liquor is below about 5 per cent of the total active soda present. The reuse of full Keebra black liquor not only saves its evaporation, but there is a great amount of unusued Na_2SO_3 present which assists the digestion of the wood.

Strongly Fired Roasters Undesirable

For the best working of the Keebra system, smelters or strongly fired rotary incinerators should not be used, so as to keep the sulphide and, consequently, the thiosulphate content, as low as possible. The use of smelters, of course, does not matter if practically all the sulphite liquor can be made up of fresh soda ash, but if any full Keebra cooks are made, there is too big a percentage of sulphite liquor required to make this possible. The following table shows the difference in the sulphide content of the causticised recovered liquors in three mills. Mill 3 uses rotaries with scarcely any fuel, the black liquor burning itself. Mill 1 uses rotaries, but with a powerful oil-burning equipment. Mill 2 uses smelters. All are working on semi-Keebra black liquor. Figures as lb. Na_2O per cubic foot.

Mill	1	2	3
Na_2OH	2.96	4.6	3.1
Na_2S	0.61	2.2	0.11
Na_2SO_3	0.11	?	0.09
Na_2CO_3	0.37	0.4	0.2
$Na_2S_2O_3$	0.03	?	?
Na_2SO_4	0.45	?	?
Total	4.53	7.9 (approx.)	3.5

On sulphiting the liquor from Mill 1 after adding Na_2CO_3 to the extent of 40 per cent of the weight of its soda, the following liquor resulted. Figured as lb. Na_2O per cubic foot:—

Na_2OH —0 Na_2S —0 Na_2SO_3—5.05
Na_2CO_3—0.19 $Na_2S_2O_3$—0.28 Na_2SO_4—0.31

The liquor from Mill 2 has twice the percentage of sulphide as for Mill 1, and it is quite unsuitable for sulphiting, as the percentage as represented by Mill 1 after 40 per cent soda ash is added is about the limit. It is seen that in Mill 3, the sulphide content is very low and would give no trouble with thiosulphate on sulphiting, so it is thus seen to be advisable to burn the ash without excessive firing, as is done there.

Corrosion Negligible

It has been discovered that thiosulphate has a very small, almost negligible, corrosive effect on steel, but apparently, if the same digester is continually used for full Keebra cooking, a skin is formed in one cook which is quite impervious to any further action of the thiosulphate. As this skin is soluble in caustic liquor, it is advisable, though not essential, as the action is so slight, to keep the digesters separate for the full and the semi-Keebra processes. The amount of thiosulphate normally present in a semi-Keebra liquor is so small as to be entirely negligible.

Process Is Thoroughly Practical

It should be realized, however, that despite the possible difficulties outlined above, if the process is properly worked, it is in every way as simple as the ordinary alkaline processes, and only requires the attention such as should be accorded to any process to produce highly satisfactory results. It is no more difficult to control than the sulphate process. The Keebra process is being used with success in three mills today, one of which is making the finest book and writing papers of all wood furnish in America, and the other two are finding that the pulp satisfactorily metes their own special requirements. The process has been developed and patented by E. P. McKeefe and L. Bradley, of New York, U. S. A., and, considering that it is only two or three years since the process has been used on a commercial scale, there are likely to be further improvements and developments in the future. The pulp is especially well suited for certain grades of both fine and other papers, besides the benefits of an increase in the yield of wood of about 6-8 per cent over soda for semi-Keebra wood pulp, and 10-12 per cent for full Keebra. Notwithstanding the higher yield, the resulting pulp apparently keeps its strength and colour without deterioration. A sample of paper made two years ago of 100 per cent full Keebra pulp has been observed by the writer to have retained its strength and color unimpaired.

Steam Accumulator at Price Bros. Riverbend Mill

In *Power* of November 2, 1926, is a very interesting descriptive article on the operation of a Ruths high pressuce steam accumulator system in connection with an electric steam generator with two paper machines and three sulphite digesters, at the new Riverbend, Que., plant of Price Brothers & Co., Ltd.

The accumulator is 53 x 14 feet with a volume of 7500 square feet and storage capacity for 40,000 pounds of steam in a pressure range of 150 to 25 pounds.

The article is illustrated by charts of the boiler and accumulator pressures, indicating that the boiler pressure is not affected by the varying steam demand as the accumulator takes care of these variations.

Other interesting charts shown are records of the varying steam consumption of the digesters and each of the two paper machines as well as the rate of charging and discharging the accumulator.

The article also contains a detailed description of the construction and operation of the pressure governors by which the accumulator system is automatically controlled.

Brazilian Paper Mill to Use Eucalyptus

Modern Brazil, a monthly magazine in English published in Sao Paulo, Brazil, contains an article on the plans of the Paulista Railway Company for building a paper mill to use eucalyptus wood from its plantations, as the source of paper pulp, and using the sulphite process.

Mention is made of the experimental work on eucalyptus carried out at the Forest Products Laboratory for Dr. Navarro de Andrade and the presence in Sao Paulo of R. N. Miller who is now studying the project at Sao Paulo.

It is stated that the plant will be located between Campinas and Limeira in close proximity to the Railway company's extensive eucalyptus plantations, and will consist of a sulphite mill and a paper mill.

From the data given the sulphite mill will evidently have a capacity of about 50 tons of pulp and the paper mill will have one paper machine to make 50 tons of news print paper per day.

It is stated that news print represents 70 per cent of the paper used in Brazil and that the product of the new mill will take care of the Brazilian demand and leave some for export.

Paper Executive on Industrial Committee

DENVER, Col., November 20, 1926.—Wilbur F. Denious of the Colorado Pulp and Paper Company has been appointed a member of the Denver Chamber of Commerce industrial committee. One of the major purposes is to create a loan fund to assist new concerns locating in Denver. R. M. Scott, Jr., is secretary and is in charge of the work.

Temperature Schedule in Sulphite Pulping*

By W. H. Swanson[1]

A properly selected temperature schedule is more important than any other single factor in the production of high yields of strong bleached or unbleached sulphite pulp.

There is a critical temperature which must be attained before the pulping action will proceed at an appreciable rate. That critical temperature for spruce is in the vicinity of 110°C. The indications are that it is approximately 120°C. for hemlock and may be still different for other species. It naturally divides the temperature schedule into two distinct parts. That below the critical temperature may be termed the preliminary heating period, and that above the critical temperature the pulping period.

During the preliminary heating period the cooking acid should have time to penetrate the wood and establish the intimate contact necessary to the production of pulp of uniform quality with a minimum of screenings. It is desirable, however, to make this period as short as is consistent with uniform penetration. Experience has shown that in the case of spruce it may be as short as one hour if chips about 5/8 inch in length are used, but since sulphite chips are usually longer than 5/8 inch, it is preferable to allow two hours. In the case of hemlock, since penetration of the chips takes place more slowly, the preliminary heating period should in no event be less than two hours and should preferably continue for 2½ or 3 hours.

During the pulping period—that is, while the temperature is above the critical value—both the maximum temperature and the manner in which it is reached are of the utmost importance. The maximum temperature should be as low as is consistent with the time available for cooking. The temperature rise is accompanied not only by an increase in the rate of pulping, but, under the limitation of pressures used in commercial installations, by a loss of sulphurous acid from the digester. The latter fact determines, in some measure, the maximum permissible temperature consistent with high yield and quality of product. For a digester pressure of 75 pounds the maximum temperature should not exceed 150°C., inasmuch as at higher temperatures the sulphurous acid will be too completely exhausted.

Investigations at the Forest Products Laboratory have clearly proved that, for high yield and quality of sulphite pulp, it is important that the temperature during the pulping period should rise very gradually in the early part, the maximum being reached comparatively late in the cook and held to the end. The application of this principle to certain leading cases will be shown in the following paragraphs.

News Grade Pulp from Spruce

In producing pulp from spruce for newsprint it is at present the almost universal practice to cook in as short a time as possible, the idea being that the more often the digesters are "turned over" the greater will be production and the lower will be the overhead. In order to complete the cook in the short time available, manufacturers have been obliged to raise the temperature at a very rapid rate, say, in two or three hours from 110°C to between 145° and 150°C., and then to maintain it at about that point for at least two hours. Pulp is produced, to be sure, but its quality is not good nor is the yield what it might be. A better practice would be to bring up the temperature from 110° to 150°C. at a uniform rate of six degrees per hour. The cooking time (allowing two hours for preliminary heating) would be increased from about 7 hours to 8½ hours, but the yield of pulp would be from 5 to 10 per cent higher and the quality improved in proportion. It would seem, therefore, that the necessary sacrifice of time would be warranted.

Strong Pulp from Spruce

In producing the better grades, such as strong and easy bleaching pulps, more time and more care are usually taken than with news grade pulp. But here again there is a tendency to raise the temperature too rapidly. Because of the longer total time allowed, *i. e.*, from 9 to 12 hours as a rule, the maximum temperatures aimed at are not quite so high, being usually between 140° and 145°C., but again a too rapid rise to these relatively high temperatures tends toward reduction in both yield and strength of the pulp produced. On the other hand a very high grade of strong pulp of high yield can be produced in 10 hours by bringing the temperature to 110°C. by the end of the second hour and maintaining a rise of 4.5° per hour thereafter.

Easy-Bleaching Pulp from Spruce

In making easy-bleaching pulp, the aim should be to do so without reduction of yield and with no material decrease in strength. Experiments have shown that this can be done, and in a reasonable length of time. The principle of gradual temperature rise during the pulping period has general application here, but is modified to provide for constant temperature toward the end of the cook. Thus, presupposing a penetration period of two hours to 110°C., a uniform rate of temperature rise from that point to a maximum of 145° to 148°C. in seven hours followed by a rest period of 1.5 hours at the maximum temperature will result in a cooking time of 10.5 hours, which is not excessive. A pulp yield of 52 or 53 per cent, air-dry, together with a bleachability of 12 to 14 per cent will result, and without material sacrifice of strength.

Strange as it may seem, a cook may be held at high temperatures for a considerable period of time without appreciable injury to the pulp, provided the high temperature has been reached at not too early a stage in the process of purifying the pulp. But raising the temperature above 135°C. too quickly will certainly harm the product.

A still better pulp than any of those described above may be obtained by raising the temperature even more slowly during the early part of the pulping period. Excellent results have been obtained with a schedule which calls for two hours to 110°C. and a rise of 3° per hour for 3 hours thereafter, followed by a rise of 7° per hour for the next four hours and concluding with a rest period of 1.5 hours at the maximum temperature. A yield of 53 per cent, air-dry, may be obtained, with a bleach requirement as low as 12 to 14 per cent. The pulp at the same time is strong, possesses good felting qualities, and is capable of withstanding considerable beating without injury.

The best easy-bleaching pulp that the Forest Products Laboratory has been able to obtain with a cooking time of 12 hours was made from spruce by bringing the temperature to 110°C. at the end of the second hour, to 120°C. at the end of the third, and thereafter by a uniform rise to 140°C. at the end of the 12th hour. The pulp represented a yield of approximately 54 per cent, air-dry, was bleached with 12 per cent of bleaching powder, and possesed excellent strength and felting properties combined with the very desirable quality of softness.

Strong Pulp from Hemlock

Temperature schedules found favorable for spruce must be modified to some extent for hemlock. Whereas, the critical temperature for spruce is about 110°C., for hemlock it appears to be approximately 120°C. The preliminary heating period must be extended, therefore, to the latter temperature, beyond which

* Presented at the meeting of the Northwest Division of the Pulp and Paper Mill Superintendents' Association, Green Bay, Wisconsin, Oct. 16, 1926.

[1] Associate Chemist in Forest Products, U. S. Forest Products Laboratory, Madison, Wisconsin.

the same principles of temperature rise apply as have been presented for spruce. Bearing in mind that hemlock is more difficult than spruce to penetrate with the cooking liquor, the following schedule is suggested: Bring the temperature to 110°C. at the end of the third hour, to 125°C. at the end of the fourth hour, and by uniform rise thereafter to the maximum, which should not exceed 150°C. For the production of a high yield of strong pulp, 7 hours or more, depending upon the maximum temperature selected, will be required to complete the cook after reaching 125°C.

Temperature Schedule During "Blow-Down" Period

The temperature schedules described need not interfere in any way with the customary practice of "blowing down" the digester during the latter part of the cook. The temperature should not be allowed to deviate from the schedule during that operation. By maintaining a high temperature to the end of the cook a more thorough recovery of free sulphur dioxide will be effected and no harm done to the pulp.

Temperature Schedules Applied to Mill Operation

It cannot be too strongly emphasized that the development of the temperature schedule as outlined for the various cases above has been based upon experiments in which the temperature was reasonably uniform throughout the digester and could be accurately determined. In applying the schedules to commercial practice due consideration must be given to the greater possibility of variation of temperature throughout the large digesters and to the difficulty of obtaining temperature measurements that are accurate and representative. Considering the importance of the temperature schedule in the production of a high yield and quality of pulp, a reasonable amount of trouble and expense should not be spared by manufacturers in obtaining accurate measurement and control of the temperature and in reducing variations throughout the digesters to a minimum.

Summary

The important principles which have been established experimentally regarding the temperature schedule in the cooking of sulphite pulp may be summarized as follows:

1. The digester should be heated rapidly to the critical temperature, *i. e.*, to the point at which the pulping action proceeds at an appreciable rate. For spruce that point is approximately 110°C. and for hemlock about 120°C. The rate of temperature rise to that point will be limited only by the time necessary to insure thorough penetration of the chips with the cooking liquor.

2. When the digester is operated at the pressures commonly used, temperatures in excess of 150°C. are inadviseable owing to the low content of sulphurous acid left in the liquor above that point.

3. The maximum temperature should be as low as is consistent with tte time available for cooking.

4. For high yields of strong bleached or unbleached pulp the temperature should be raised from the critical point to the maximum at a uniform rate or, preferably, allowed to follow an upward curve gradually increasing in steepness as the maximum is approached.

5. To obtain high yields of strong bleached pulp in limited time, the temperature should be raised to the maximum about 1-1/2 hours before the end of the cook. During the last 1-1/2 hours the maximum temperature should be maintained.

Longview Fibre Co. Opens Office

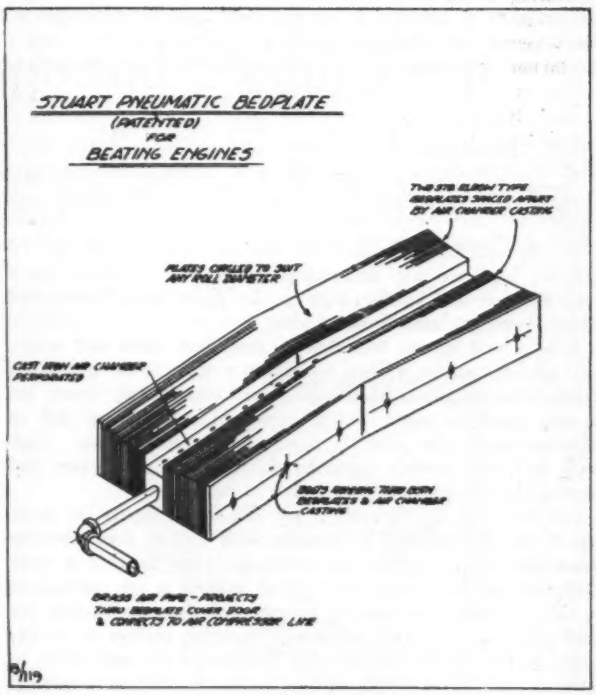
[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., November 19, 1926.—L. C. Peabody, formerly of Kaukauna, Wis., has arrived in Longview, Wash., and has established a temporary office there for the new Longview Fibre Company. This will be the headquarters of the corporation during the construction of the new $2,500,000 pulp and paper mill in that place. W. E. Dodge, construction superintendent, is expected by the middle of November, and upon his arrival the actual construction will get under way. Mr. Peabody has been connected with the Thilmany Paper Company for a number of years and is an expert in managing the office affairs of large projects.

Pneumatic Beater Bedplate

The Stuart pneumatic beater bedplate is the invention of David Stuart, of Windsor Mills, P. Q., and is manufactured and sold by the Dilts Machine Works, Inc., Fulton, N. Y.

In his long experience in papermaking Mr. Stuart learned much about the science of preparing stock in the beating engines, for "paper is made in the beaters." The fibre for good paper must be *drawn* rather than *cut* or *beaten*, and the vital



point in the operation is the point of contact of the fly bar edge with the bedplate surface.

Mr. Stuart's pneumatic bedplate, which is patented in United States and Canada, provides a draft space between two sections of the regularly spaced metal surfaces, and into this space he recommends that compressed air be injected. If no air under pressure is available the plate may still be used to advantage over plates of standard design, but air pressure is desirable.

According to his experience and theory the draft space causes the stock to travel faster, the fibres are crossed and their relative positions disturbed, and the stock comes through cool and uniform. Thus the effect is to prevent "free" and "slow" stock on the machine. On paper stock this plate cleans the furnish very quickly, and leaves the stock strong.

There appear many advantages in the use of the Stuart pneumatic bedplate. It is recommended by the Brompton Pulp & Paper Company, who have had three in use over a period of six months on kraft stock. It is being tried out in other mills, and the Bogalusa Paper Company is trying it on their southern pine kraft. There seems no doubt that Mr. Stuart has hit upon a real improvement in his application of this idea.

More About Evaluation Of Sulphite Pulp

Contribution to the Cellulose Committee

By Dr. Th. Bentzen [1]

Since the annual convention of the Technical Association in New York, where I had the honor of presenting my paper, "Evaluation of Sulphite Pulp," I have repeatedly had the opportunity of making determinations of sulphite pulp, using the mercerization method described, and without exception this method has been found uniform and reliable. Besides this, I have reports from professional colleagues who have introduced this method in their laboratories with the same good results.

Some of these reports confirm the theory of Carl Hofmann, which was partly proven through Experiment 4 to be right that the presence of chlorine in the stuff will cause a breakdown of the cellulose from the paper passing over the hot driers, and I am permitted to make use of some of the reports for illustration.

Mercerization Test	Pulp from Wire	Pulp after passing Driers
Alpha Cellulose %	82.36	73.89
Beta Cellulose %	14.96	20.11
Gamma Cellulose %	2.68	6.00

In this way about 8.5 per cent of the resistant cellulose was broken down, being changed to inferior and partly useless material.

As the stuff used for this run was considered "pretty nearly chlorine free" we may understand that a stuff containing much free chlorine will easily result in the paper being brittle and without strength after a short time.

It is a well known fact that to save time, labor and water, the pulp is usually washed too short a time to be completely freed from chlorine. Sometimes it will contain only traces but usually more, so much that the smell of chlorine can still be observed while the paper is passing over the machine. Such stuff will have already begun to decompose in the beater, and passing the hot driers the paper will be ruined.

The chlorine (Cl) in itself is not able to decompose the fibers, but it has the tendency to combine with acid to form chlorine monoxide (Cl_2O), a brownish-yellow gas, and as even a weak acid, such as the carbonic acid (CO_2) present in the atmosphere, is able to make the reaction complete, during the beating the stuff offers a large and continually changing surface to be exposed to the air and the chlorine will have rich opportunity to combine with the carbonic acid to form the chlorine monoxied. This chlorine monoxide (Cl_2O) will then combine with water (H_2O) and produce hydrochloride acid (HCl).

So far as can be explained the following reactions take place:

1.

$$\underset{\substack{\text{Chloride of Lime}\\\text{(Bleaching Powder)}}}{2\,CaOCl_2} + \underset{\substack{\text{(From the Atmosphere}}}{CO_2} = \underset{\text{Calcium Chloride}}{CaCl_2} + \underset{\text{Calcium Carbonate}}{CaCO_3} + \underset{\text{Chlorine Monoxide}}{Cl_2O}$$

2.

$$\underset{\text{Chlorine Monoxide}}{Cl_2O} + \underset{\text{Water}}{H_2O} = \underset{\text{Hypochlorous Acid}}{2\,HClO}$$

3.

$$\underset{\text{Hypochlorous Acid}}{2\,HClO} = \underset{\text{Hydrochloric Acid}}{2\,HCl} + \underset{\text{Oxygen}}{O_2}$$

As the hypochlorous acid is an unstable substance, it will decompose probably as follows:

Hydrochloric acid in the presence of water attacks cellulose with the production of a variety of insoluble and soluble derivatives. (Cross, Bevan and Sindall, "Wood Pulp," page 52).

Therefore, the best thing to do to produce a paper of reliable, permanent quality, is to wash the halfstuff until even traces of chlorine are removed, to prevent its dangerous influence upon the less resistant sulphite pulp.

[1] Member TAPPI, Chief Chemist, Whiting-Plover Paper Co., Stevens Point, Wis.

I take this opportunity of directing attention to a misprint in the paper about Evaluation of Sulphite Pulp.* In the chapter "Determination of the Three Groups," paragraph 17, the formula for mercerized cellulose is given as $C_6H_{10}O_5 2NaOH$ instead of, according to Cross and Bevan, $(C_6H_{10}O_5)_2 \cdot 2NaOH$.

In this paper I set up the hypothesis that the beta-cellulose acts as a kind of sizing material and as such may be supposed to add cohesion and thereby strength for the paper. It is, of course, very difficult to present evidence for this theory, but comparing the manufacturing results from different grades of sulphite pulps (of known cellulose values), I feel sure that it may be regarded as a fact that a reasonable amount of the beta cellulose, supposed to be present in any high grade sulphite pulp, will be of more help than harm to the paper, due to its quality of a sizing material, provided that the stuff is, however, chlorine free.

Yellow Spots Relation to Betacellulose

I expressed the opinion that the well known yellow spots, often present in sulphite pulp, have a relation to the beta-cellulose.

As I started my investgaton of this matter and was looking out for material having yellow spots, I found that they had become rather infrequent and at the present time were only to be found as a rare exception. It, therefore, seems that the pulp mills have recently been able to overcome the trouble, at least to a very great extent. I had to fall back upon some samples of sulphite pulp which had been left behind to get my material for examination.

Through preliminary experiments on the yellow matter still in the pulp sheet, it was found that two quite different kinds of yellow spots were present. One kind was soluable in absolute alcohol, acetic acid, chloroform, ether, etc., and when exposed to heat they melted, changing their shape, in this way showing the well known, characteristic qualities of resin. The other kind was not at all affected by any of these solvents nor by heat, and we now know it is not rosin, but believe it probable that they are due to cellulose. Also, since the yellow color of the spots, in combination with their insolubility, had directed our attention to some of the properties of the beta-cellulose, we shall continue our investigation in this direction.

Procedure

1. Some of the yellow matter is dissolved in a 10 per cent solution of sodium hydroxide.
2. The solution is filtered.
3. The filtrate is acidified with acetic acid.
4. Digested on water bath with moderate heat until the precipitate coagulates sufficiently to be collected on a paper filter.
5. Wash and drain.
6. Dry the filter with the precipitate.

In this precipitate we recognize the beta-cellulose, the same as we obtained from our experiment with the mercerization method, according to the chapter about determination of the three groups of cellulose in the previously mentioned paper on Evaluation of Sulphite Pulp.

* * * *

Just as I had regarded the sulphite pulp matter as a *fait accompli* for my part, hoping that some other member of the Cellulose Committee would make further experiments and thereby either confirm my theories or prove their defects, a sample of

* Technical Association Papers Series 9 (1926) p. 51.

sulphite pulp was sent me with the request that I test it according to the method I am advocating and give a report of the results of my investigation.

It had been stated that this pulp gave a very good copper figure but, nevertheless, a very poor paper, especially with respect to strength.

I prepared a test sample and mercerized it as usual. As the mercerized pulp was placed upon the alundun filter and the vacuum was turned on, a part of the cellulose passed the filter, very soon reducing its porosity to such an extent that it was necessary during the filtering process to wash out with hot water.

This cellulose is evidently a grade of alpha cellulose, as it still has the quality not to be dissolved in alkali soution but a grade which is broken that far down that it has changed its form from fibers into a colloidal form.

The filtrate was placed in a sediment glass, which then, as usual, was ecidified to determine the contents of beta and gamma cellulose, and in this way the analysis gave the following result:

Real Alpha Cellulose	59.47%
Colloidal Cellulose	19.73
Beta Cellulose	12.80
Gamma Cellulose	8.00

If you ask me for a special name or designation for this grade of colloidal cellulose, I shall answer you, that for the paper maker only two kinds of cellulose exist:—

1. Cellulose which makes paper, and
2. Cellulose which makes trouble,

which means, according to this calculation, that about 59.5% of the sulphite pulp in question was paper making and 40.5% more or less trouble making.

Besides this experiment proves that *the copper figure method is pretty unreliable* as a test for the value of pulp for paper making, since in this sample about 20% of worthless cellulose will react as real alpha cellulose.

The Armstrong Compound Steam Trap

To meet the demand for a steam trap that will handle large quantities of water at high pressures the Armstrong Machine Works, Three Rivers, Mich., have, after a great deal of experimental work, developed the Armstrong compound trap which is a combination of its inverted bucket trap and a piston actuated valve.

This trap incorporates the several features of the inverted submerged bucket principle used in the standard Armstrong trap in connection with the large capacities possible with the piston actuated valve. Some of its features are:

Non-airbinding.—The non-airbinding feature of the Armstrong standard trap is retained in the compound trap eliminating the possibility of the failure of the trap to operate because of becoming airbound or the waste of steam to avoid airbinding.

Self cleaning.—The self cleaning feature is also an advantage in the compound trap. Accumulations of scale and heavy dirt which are not carried through the trap may be easily removed as all parts of the compound trap are easily accessible without disturbing pipe connections.

Quick Action.—The quick, intermittent action of the standard trap incorporated with the piston actuated valve, results in a trap that responds quickly to a sudden influx of water, discharging large quantities, quickly closing without a steam loss when water is drained.

Large Capacity.—The Armstrong compound traps are fitted with piston actuated valves with orifices the same diameter as the pipe connections. These valves handle the major flow, though the upper valve is also wide open during discharge and handles considerable water. This valve is not, however, considered when rating the trap.

Construction

Referring to the sectional drawing, it will be noted that the trap consists of three major parts, the cap, the body and the base.

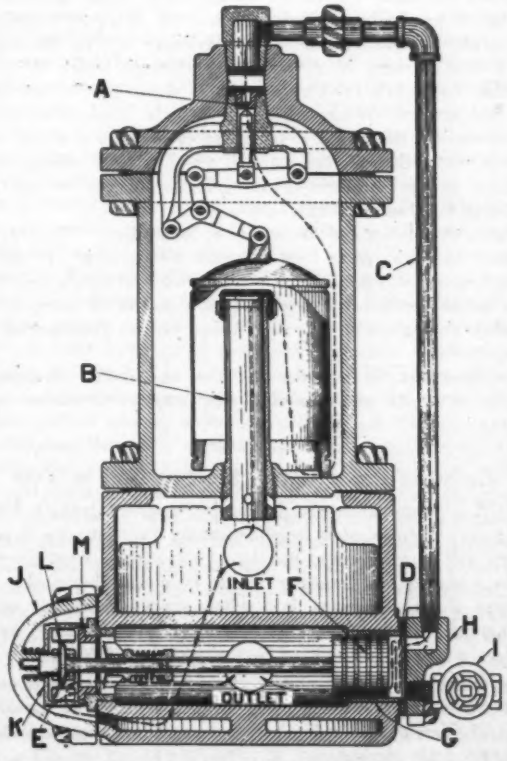
The controlling trap mechanism is the same as that used in the standard Armstrong trap and is carried by the cap. The cap and mechanism may be quickly removed for examination or repairs by disconnecting the union in the bypass pipe and removing bolts holding cap to body.

The body is a simple, symmetrical casting with a tube *B* in the bottom over which the bucket sets. The top of the tube is provided with a simple disk check valve to prevent water flowing back through the body into the base.

The base to which the body is bolted acts as a storage chamber and also contains the piston valve mechanism. Both the inlet and outlet connections are in the base.

The piston valve mechanism consists of a cylinder, piston, piston rod and a valve unit. The cylinder is bronze lined, the liner *G* slips into the base casting and is held in place by the cylinder head *H*. The piston or cylinder or both may be easily removed by disconnecting the union in the bypass pipe and removing the cylinder head.

The complete valve *E* consists of a valve *L* which is of the automobile poppet type and seat *M* assembled in a valve cage



ARMSTRONG COMPOUND STEAM TRAP

which screws into the base casting. A screen *K* sets over the valve cage preventing large particles of scale, etc., which might come through the trap, lodging on the seat of the valve and

preventing it from closing. This screen is held in place by the valve cap *J* which covers the valve and bolts to the base.

The valve unit is easily removable by first removing the cover and then unscrewing the cage.

The valve parts are of heat-treated chrome steel, exclusive with Armstrong. The various parts of the mechanism are made of acid resisting bronze with the exception of the valve parts. The piston valve parts are made of heat-treated chrome steel and ground.

The cap, body and base castings are of high tensile strength cast iron such as has been developed for automobile cylinder castings. They are given a careful hydrostatic test for strength and a steam test for operation before shipment.

Operation

Referring to the attached drawing, the operation is as follows:

Assuming that the upper trap is full of water, with the exception of the bucket which contains steam and is afloat, the valve *A* is closed. If no water is coming to the trap, steam flows in the inlet and up through the tube *B* replacing that which condenses in the bucket and the bucket remains afloat and valve *A* closed.

As water accumulates in the base, the level rises until the end of the tube *B* is submerged which prevents a further flow of steam into the bucket. The bucket then loses its buoyancy and sinks, opening valve *A*. A discharge then takes place through valve *A* as shown by the light dotted line and arrows, around down through the pipe *C* and into cylinder *D*. Pressure is built up against the piston which forces the valve *E* open. Water from the inlet and base then flows around to and through the valve *E* and out the outlet as shown by the heavy dotted line and arrows.

The discharge continues until the level in the base lowers and uncovers the lower end of the tube *B* when steam flows up into the bucket causing it to float and close the valve *A*, stopping the discharge through the pipe *C* into cylinder *D*. In the head of the piston *F* there is a small vent through which there is a constant flow while valve *A* is open, as shown by the light dotted line and arrows. When valve *A* closes, the pressure in cylinder *D* and against the piston *F* is dissipated through this hole. The flow of water through the valve *E* tends to close this valve and as soon as the pressure in the cylinder against the piston is dissipated, the valve quickly closes.

The above completes the cycle of operation. The trap will continue to discharge as long as water comes to it. If the flow is very small, it may be entirely handled through valve *A*. A large quantity will cause a momentary opening of valve *E*. Air escaping through vent in the bucket is handled through the valve *A*.

The base has, in addition to inlet and outlet openings, an opening to which an equalizing pipe may be connected where specifications call for it.

Gatineau Paper Co. to Start at End of Year

The first power from the Gatineau Power Company's 373,500-horsepower hydro-electric development on the Gatineau River in Canada will be available at the end of the current year, according to the construction company which is doing the work. The Gatineau Power Company is a wholly-owned subsidiary of the International Paper Company, which is also building on the Gatineau a news print mill to have a capacity of 600 tons a day.

The first hydro-electric unit scheduled for completion is one of five 34,000-horsepower units being installed at Gatineau. By March 1 next, the first of five 24,000-horsepower units at Farmers Rapids is scheduled for completion.

The remaining units of the Gatineau River development are being constructed at Paugan and are scheduled for completion in 1928. In addition to being the largest paper company in the world, this power development makes International one of the largest waterpower companies in Canada.

Increased Paper Shipments Through Champlain Canal

GLENS FALLS, N. Y., November 22, 1926.—With the close of the navigation season on the Champlain barge canal drawing near there has been a very noticeable increase in paper shipments during recent weeks. The number of barges from Canadian points passing through the canal bound for Metropolitan points is the largest to be noted in several years at this time of the season. Canal shipments of paper from Canada will continue to be heavy until the close of navigation, according to local observers, as the water route through Lake Champlain, the Champlain canal and Hudson River is a favorite one with Canadian shippers, especially manufacturers of news print, as it provides a much cheaper method of shipment and is generally considered more satisfactory than the railroads.

Among the Canadian mills, one of the largest users of the canal during the past season has been the International Paper Company which has been sending large shipments of news print regularly by the water route from the Three Rivers mill to Metropolitan points. The I. P. Co. has also utilized the canal to a great extent in shipping the product of the Fort Edward mill. Wood pulp and other materials are also received at the Fort Edward mill by barge, this service continuing throughout the season from the opening of navigation until the canal freezes over.

The International Paper Company was one of the first paper concerns in this section to realize the advantages of all-water shipments and it was largely due to the activities of the I. P. Co. that special equipment was installed at the Fort Edward canal terminal to facilitate the loading and unloading of paper mill supplies. Today there is hardly a pulp or paper concern in the Glens Falls area that is not using the canal to some extent. Glens Falls mills using the Fort Edward terminal as a shipping point are forced to rely on motor trucks between here and Fort Edward at present but agitation has been under way for some time to have the state improve the Glens Falls feeder canal so that barges could be brought direct to this city.

Proceedings of the World Forestry Congress

The International Institute of Agriculture announces that the proceedings of the World Forestry Congress at Rome, April 29 to May 5, 1926, will be published by it before the end of the present year. The proceedings will include some three hundred reports submitted to the Congress, of which about one-fourth are in English, and will form five octavo volumes of about 3,500 pages. These will be divided as follows:

Volume I: Regulations and program of the Congress, list of members, text of the resolutions and recommendations approved by the Congress, general report, etc.

Volume II: Reports on Forestry in its statistical, political, economic, and legal aspects, and on instruction in forestry.

Volume III: Reports on trade and industry in timber and other forest products.

Volume IV: Reports on technical problems relating to forestry and forestry operations.

Volume V: Reports on control of torrent waters, reforestation of mountain areas, plant diseases and other injuries, fish and game, touring, propaganda, and tropical forest resources and forest utilization.

Prices of the complete work are as follows:

Members and Associate Members .....175 lire
Advance orders booked before November 30, 1926 .....250 lire
Subsequent orders .....300 lire

Payment will be accepted in American money according to the current rate of exchange, now about 25 lire to the dollar. Orders should be placed with the Publications Office, International Institute of Agriculture, Villa Umberto I, Rome, Italy. A list of the reports to be included in the proceedings can be obtained either from the Institute or S. T. Dana, Chairman, Committee on International Relations in Forestry.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

Clarence J. West, Chairman

Savealls

White Water in a News Print Paper Mill. C. K. Andrews. Paper Ind. 8, 463-464 (June, 1926); Paper Trade J. 82, No. 24, 51 (June 17, 1926); Paper Mill 49, No. 24, 18, 38 (June 12, 1926). A report is given showing the amounts of stock lost in the various places throughout the paper and pulp mills of the Itasca Paper Co., Grand Rapids, Minn., and also the methods used in calculating the losses.—A.P.-C.

Report of Test Made in a News Print Mill. A. F. Allen. Paper Ind. 8, 462 (June, 1926); Paper Trade J. 82, No. 24, 51 (June 17, 1926). Results of a one-week test at the Tidewater Paper Mills' plant, Brooklyn, N. Y., showed an average consumption of less than 3,000 gallons of water per ton of paper made, and that the inclined screen type of save-all used was extremely inefficient, the white water containing 15.5 lb. of stock per 1,000 gallons, while the save-all effluent contained 14.1 lb. per 1,000 gallons.—A.P.-C.

Report of the Committee on White Water Waste of the Superintendents' Association. H. W. Server. Paper Ind. 8, 459-460 (June, 1926); Paper Mill 49, No. 23, 34, 44 (June 5, 1926). A brief discussion of shrinkage losses in paper mills, of the screen and sedimentation types of save-alls, and of the possibility of having a closed white water system.—A.P.-C.

White Water and Deinked Stock and Book Paper. E. H. Gilman and E. G. Milham. Paper Ind. 8, 461-462 (June, 1926); Paper Mill 49, No. 23, 38 (June 5, 1926); Paper Trade J. 82, No. 24, 49 (June 17, 1926). From the experience of the Bryant Paper Co.'s mill at Kalamazoo, Mich., high speed screening savealls are not suitable for their white water (about 10 lb. of solids per 1,000 gal. of which about 7 lb. is clay), while both sedimentation and slow speed screening savealls have proved both efficient and satisfactory. The advantages and disadvantages of both types are enumerated.—A.P.-C.

White Water, Sulphite Pulp and Book Paper. W. D. Gregor. T. Larabee. Paper Ind. 8, 462-463 (June, 1926); Paper Trade J. 82, No. 24, 47-48 (June 17, 1926); Paper Mill 49, No. 25, 10, 40 (June 19, 1926). Brief description of some installations which have been found to work efficiently in the recovery of clay and fiber in book mills.—A.P.-C.

Dorr Saveall Operation: Book Paper. N. J. Niks. Paper Ind. 8, 464, 467 (June, 1926); Paper Trade J. 82, No. 24, 50 (June 17, 1926). Brief outline of the operation of the Dorr savealls at the Peerless Division of the Mead Pulp & Paper Co. White water carrying 23.0 lb. of bone dry stock per 1,000 ga. is fed at rate of 375,000 gal. of each Dorr. The clarified water runs about 1.64 lb. per 1,000 gal. of which 20 per cent is fiber and 80 per cent filler; and the recovered stock or Dorr slush runs about 108 lb. per 1,000 gal.—A.P.-C.

White Water, Sulphite Pulp and Book Paper. W .D. Gregor. Paper Mill 49, No. 23, 36, 42 (June 5, 1926); Paper Trade J. 82, No. 24, 48-49 (June 17, 1926). A description of the system installed at the mill of the Newton Falls Paper Co. for handling return waters.—A.P.-C.

White Water: Book Paper. S. C. Wentz. Paper Ind. 8, 460-461 (June, 1926); Paper Trade J. 82, No. 24, 50 (June 17, 1926). Under the conditions existing at the P. H. Glatfelter mill, Spring Grove, Pa., the most efficient sedimentation system for the recovery of white water solids consisted in running the white water over the pneumatic savealls (with which all the paper machines are equipped), and then over the Dorr savealls.—A.P.-C.

Special Papers

A Study of Case Lining Papers. B. W. Scribner and F. T. Carson. Pulp & Paper 24, 565-568 (May 20, 1926). Preliminary tests of a number of different types of domestic and foreign waterproofed wrapping papers, taken in conjunction with the service records of these papers, indicated that as regards both strength and water resistance the type known as "duplex asphalted waterproofed" is best suited for case-lining, for overseas shipments. This was confirmed by further investigation, which also showed that the bursting strength of the asphalted paper is generally much greater than the combined strength of the two sheets of basis kraft paper used in its manufacture. The recommended specifications are: the paper to consist of two sheets of 100 per cent sulphate kraft paper cemented together with a layer of asphaltum; the weight to be 109 lbs. per 500 sheets, 25 x 40 inc., with a tolerance of 10 lb.; bursting strength (Mullen) not less than 70 points; water resistance by the ground glass method, should show no transudation in 24 hours.—A.P.-C.

Carbon Paper. A. Haigh and H. R. Hart. U. S. pat. 1,563,978, Dec. 1, 1925.—In order to prevent the staining of the back of the carbon paper during coating, two sheets of coating stock are placed back to back with either one or two interleaving sheets between them. The composition can be applied first to one side of the paper and then to the other in two operations, or both sides may be simultaneously coated by any of the usual methods. When two backing sheets are used, each one may be kept in contact with its respective coated sheet, and separated only when the latter is ready for use. The attachment of the papers one to another may be effected by bringing the sheets or webs of paper together while one or more are in a moist condition and causing them to adhere by pressure.—A.P.-C.

Stencil Sheet. G. Leonard. U. S. pat. 1,576,663, March 16, 1926. A loose-fibered paper is coated with a solution of shellac, triacetin and diethyl phthalate.—A.P.-C.

Asbestos Cigarette Paper. N. Sulzberger. U. S. pats. 1,581,618 and 1,581,619. Apr. 20, 1926. No. 1,581,618—Colloidal aluminium silicate and an oxidizing agent such as potassium nitrate are used in asbestos paper for wrapping cigarettes, etc. No. 1,581,619—Relates to a tissue like flexible paper made of asbestos substantially free from organic matter but containing an inorganic colloid such as aluminium silicate.—A.P.-C.

Marbleizing Paper. J. Lecjaky. Assignor to H. S. ec. U. S. pat. 1,579,872, Apr. 6, 1926. A paper surface is coated with a liquid such as a "walnut crystal" solution and before the coating dries a second liquid, *e.g.*, a caustic potash solution, is applied at localized points of the surface. One of the liquids contains a hard soap, and one of them at least contains coloring substances. Various modifications are described in the specifications.—A.P.-C.

Safety Paper. J. W. Neff. U. S. pat. 1,578,908, March 30, 1926. Invisible indicia are printed on paper with a colorless chemical salt, such as aniline hydrochloride, which will produce visible markings when the paper is treated with a bleaching agent.—A.P.-C.

Waterproofed and Fireproofed Paper. M. Brandt, assignor to Atlas Powder Co. U. S. pat. 1,581,779, Apr. 20, 1926. A paper suitable for wrapping dynamite is prepared by impregnating paper with a fireproofing material such as ammonium chloride and coating it with a thin film of a flexible substance such as paraffin or rubber which is impervious to both water and nitroglycerine. —A.P.-C.

Paper Bags. H. G. Robinson, S. H. G. Barnett and H. Humphreys. Eng. pat. 248,037. The bags are formed with double or treble folds at each folding part for the purpose of reinforcement, as it is generally found that the weakest parts of bags are the folds.—A.P.-C.

Paper Cups. Vortex Manufacturing Co. Eng. pat. 248,075. This improved machine for making paper cups is provided with a number of stops, pins and fingers for holding the cups during transfers to different parts of the machine for folding, gumming and stacking, so that the operation is carried out in an automatically progressive manner, and the completed cups packed in nests without fear of displacement.—A.P.-C.

One-Piece Cardboard Case. T. P. Bethell. Eng. pat. 248,931. This case which, when folded has upright sides similar to a box, has also a handle integral with itself formed from a curved end from which a center piece is cut. The box serves well as a carrier for eggs, confectionery, etc.

Apparatus for Saturating Roofing Felt. R. T. Johnston assignor to the Flintkote Co. U. S. pat. 1,558,549, Oct. 27, 1925. The felt is impregnated under pressure (about 60 lb. per sq. in.) with blown asphalt having a melting point of approximately 200° F., kept at a temperature of about 400° F. Under these conditions thorough impregnation is obtained in about 3 to 4 seconds. The apparatus described permits of continuous operation. A loop of the roofing felt is enclosed in a suitable tank containing the hot asphalt and subjected to pressure for the required length of time. While the portion in the tank remains stationary during treatment, the raw stock is formed into a loop. As soon as treatment is complete the treated material is rapidly withdrawn from the tank and formed into a loop, while the loop of raw stock is simultaneously drawn into the tank. During the next period of treatment the loop of impregnated felt is gradually taken up by the finishing machines (surfacing, reeling, cutting, etc.), so that the whole operation is continuous.—A.P.-C.

Coating Pasteboard. L. Schwabe. U. S. pat. 1,579,036, March 30, 1926. Pasteboard is coated continuously with asphalt, tar, resin, rubber, etc., either by applying the coating mass to an endless metal band and then pressing upon the unrolled web of pasteboard, or by applying the coating mass directly to the pasteboard and then pressing it thereon by means of an endless bank.—A.P.-C.

Apparatus for Testing the Bending Strength of Pasteboard, Cardboard, etc. A. Schopper. U. S. pat. 1,559,466, Oct. 27, 1925. The test piece is attached to two plates, which are rotatable about a common axis, so that by moving them into an angular relation with each other the test piece is bent and broken. The rotation of one of the plates, from a position of rest, is opposed by a progressively increasing force due to a weighted pendulum or equivalent device, and means are provided for measuring the angle through which each plate is moved.—A.P.-C.

Fiber Board from Bagasse. T. B. Munroe. U. S. pat. 1,574,254, Feb. 23, 1926. Piled bagasse is subjected to acetic fermentation until the fibers are partially loosened from the bundles in which they occur. The fermentation is stopped before the strength of the fibers is impaired, the material is mixed with fibers from wood, cooked, refined and mixed with fire-resisting material and formed into fiber-board.—A.P.-C.

Increasing the Combustibility of Cigarette Paper. Paper Trade J. 82, No. 21, 60 (May 27, 1926). The author suggests using a small amount of cellulose nitrate or of cellulose chlorate, and describes a method of preparing these esters.—A.P.-C.

Protected Paper Currency, etc. P. A. Sawyer. U. S. pat. 1,575,940, March 9, 1926. A design is printed on paper with ink adapted to give strong adherence with the protective coating employed and, after drying, both sides of the paper are sprayed with a thin solution of a cellulose ester in a volatile solvent and dried.—A.P.-C.

Testing Currency. Paper Mill 49, No. 22 (May 29, 1926). The life of currency paper has been increased by using a 25-75 cotton-linen instead of the former 100 per cent linen furnish, by very very gradual application of roll pressure in beating to prevent cutting the fibers too short and obtain a proper brushing out of the fibers, by beating at a low consistency to obtain rapid circulation and minimum of hydration, and by hardening the glue surface sizing with formaldehyde.—A.P.-C.

Pulp Articles Treated with Sulphuric Acid. A. Tingle. U. S. pat. 1,575,290, March 2, 1926. Food receptacles or other articles pressed from ligneous pulp are treated superficially with sulphuric acid of about 57° Be. strength to render them impervious. The acid is then neutralized and the article dried.—A.P.-C.

Lubrication

Progress in Paper Mill Lubrication. Vacuum Oil Co. Paper Trade J. 82, No. 25, 59-60 (June 24, 1926). Brief outline of recent improvements in the lubrication of pulp and paper mill machinery.—A.P.-C.

Lubrication an Important Factor Affecting Cost of Conversion. T. E. Dial. Paper Ind. 8, 471-475 (June, 1926); Paper Mill 49, No. 24, 8, 20-24 (June 12, 1926). A discussion of the savings which can be effected by selection of the proper lubricant for each kind of work in pulp and paper mills.—A.P.-C.

Oil Flow in Plain Bearings. D. P. Barnard, 4th. Ind. Eng. Chem. 18, 460-462 (May, 1926). An attempt is made to present the basic laws of fluid lubrication in such a manner that they may be readily used in the correlation of test data. As is well known, these laws are founded upon the properties of the viscous flow of fluids. The work of Reynolds and Harrison has served to outline the laws governing power and film thickness. The article describes a simple method of development of the approximate laws controlling oil flow through bearings—due both to pressure developed in the film and to oil feed pressure—and presents some experimental data in substantiation of this method.—A.P.-C.

Possible Test for the Oiliness of Oils. A. H. Gill and Helen Gill. Ind. Eng. Chem. 18, 527 (May, 1926). The method, which is an adaptation of the one used by Perrot (U. S. Bureau of Mines Bull. No. 192) for measuring the "length" of carbon (gas) black, consists essentially in measuring, in the MacMichael viscosimeter, the deflection of both the oil itself and of mixtures of the oil with ignited infusorial earth. The measurements in both cases are carried out at a number of different speeds and degrees MacMichael are plotted against revolutions per minute. The "spread" or difference between the two straight lines obtained with the oil and with the oil-earth mixture is suggested as an indication of the "oiliness," the smaller the spread, the greater the oiliness.—A.P.-C.

Site for $1,500,000 Board Mill

The $1,500,000 fiber board mill to be built near the Armourdale end of the Twenty-third street viaduct will occupy land between the main plant of the Kansas City Fibre Box Company and Kansas Avenue. The box corporation has extensive land holdings there on both sides of Adams avenue.

The big mill will supply its product solely to the Kansas City Fibre Box Company, which will own and operate the mill. The company uses 125 tons of this board a day, the board at this time being shipped here from outside mills.

The announcement of the big mill last week was made when the Hinde & Dauch Paper Company, of Sandusky, Ohio, acquired the Kansas City Fibre Box Company and the Kansas City Packing Box Company from L. H. Fox and A. B. H. McGee. The Sandusky corporation is the largest manufacturer of corrugated shipping containers in the world and one of its main producing centers will be Kansas City, with James F. Cleary in charge as vice-president and general manager of the Kansas City subsidiary. The combined operations here are to be carried on as the Kansas City Fibre Box Company.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

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Conducted by THOS. J. BURKE, C.A., Sec-Treas

Costs in Profitable Manufacturing*

By William L. Walker, Vice-Pres., The Washburn Co.

To anyone who is thoroughly familiar with modern business practice the advantages of a cost system are self-evident. However, there are many who are associated with manufacturing and other business enterprises who will yet question its value.

I have heard several manufacturing executives say that they did not have much use for individual costs of goods manufactured, owing to the fact that they could not determine the selling prices of their products from the costs; meaning, of course, that they could not arbitrarily add a certain percentage of profit to their costs and then sell their products at the prices thus fixed. True, the selling prices cannot be arbitrarily determined by adding a certain definite percentage of expected profit to the manufacturing costs of the goods. How happy the manufacturers would be if this were true! In competitive industries—and this includes a very large percentage of the manufacturing industries in the country—the selling prices will generally be determined by competition in the industry. Under such conditions it will be found that some articles may be sold at an unusually large profit, while others will be actually sold at a loss to the manufacturer. This does not mean that the above mentioned condition will hold true for all the competitors in the industry; for some, when compared with others may have better mechanical equipment to produce the goods, or may have a much more efficient production system, or may be able to obtain suitable raw materials at lower prices, or labor at lower wages, or have some advantages in distributing the goods. It is not often true that any one concern has all the advantages over its competitors, from the point of view of costs, but some will have certain combinations of conditions which give them the advantage in manufacturing costs on some, or all, of the items manufactured.

It should be obvious, that under such conditions and in the absence of price agreements, which are unlawful, there will always be some concerns which will attempt to get business by cutting prices. The result of this plan is that each concern will get all it can for the goods sold. Hence, the old adage—charge all the traffic will bear—is a rule that is, consciously or unconsciously, followed in the large majority of industries if they are to be operated safely.

Theoretically, this is unsound economics, and many will argue that all commodities or services should be secured at only a fair profit. The answer to this statement is that what is a fair profit to one concern often means bankruptcy to a competitor. What may be a fair profit to a foreign competitor may mean ruin to any concern in this country. So, with our inability to stabilize costs and prices over the whole world, which would be undesirable if it could be done, as this would tend to retard progress, the business executives in the great majority of industries will get the best prices they can obtain for their products, regardless of cost.

The question is then asked: "If that is the case, why worry about costs?" The answer to this should be: "Do most of the worrying if you don't have a good cost system." When the truth is known about costs, it is generally possible and practical to eliminate most, if not all, of the unprofitable items, and either purchase them from a competitor or discontinue the sale. In every case that has come under my supervision this plan has been followed and it was adopted so readily that few, if any, members in the organization questioned the advisability of such a course.

Right here should be stated the self-evident truth that oftentimes incorrect information is worse than no information at all. This will apply to so-called costs and cost systems with such force that one would wonder if the author of the statement did not have cost systems in mind at the time it was written.

I have seen cases where manufacturing concerns were collecting masses of figures and juggling them around in various ways to produce what they called "costs." These so-called costs had been used for years as a guide in the business, and emphasis had been placed on selling what appeared from the figures to be profitable lines. The facts were, however, that when the business had been so organized that actual costs could be obtained, we found that some lines which had been thought to be unprofitable were really the most profitable lines manufactured, while many of the lines which had been considered as very profitable, or had been the so-called "velvet" in the business, were actually being sold at losses.

Many Cost Systems Are Mere Guessing

The so-called cost systems in these plants were probably worse than good guessing. Yet when a real cost system was developed, the management was very apprehensive over the fact that two or three clerks could be seen working on costs in order to secure reliable figures. The fact that there had probably been more time wasted by executives, clerks, foreman and others in trying to get some figures to satisfy their curiosity, than the equivalent amount of labor involved in getting accurate costs had evidently been overlooked by the management.

Intelligent men and women have discarded superstition and false notions as fast as the facts obtained by scientific investiga-

* From "Manufacturing Industries."

tion have been disclosed. Many business executives have followed a similar plan with regard to business management and with surprising results. Many principles of scientific management have been acknowledged by the majority to be correct and many managers of business concerns have adopted the methods for carrying out such principles. It appears to be only a question of time before all important and successful concerns will have adopted the principles of scientific management and one of these will be an up-to-date cost system which is properly coordinated with the other functions of scientifically managed enterprises.

Uses of Cost System

It is difficult, probably impossible, to enumerate all of the practical uses to which the information obtained from a complete and reliable cost system may be put.

The following will represent, in a very general way, some of the important facts which are obtained from the records of an efficient and up-to-date cost system. The multitude of uses where these facts may be used by the management in directing the business along profitable channels, must, of necessity, be only partially covered in this discussion.

1—Actual costs of goods manufactured.
2—Actual costs of expense orders, such as repairs and renewals of machinery, tools, etc., in the plant.
3—Actual costs of construction of new plant equipment, such as machinery, tools, building, etc.
4—Costs of goods sold in order to determine profit and loss on sales made, by groups of goods or by individual items.

Manufacturing costs may be readily divided into three main subdivisions, namely: (a) materials, (b) labor, and (c shop expense.

(a) MATERIAL COSTS—The quantities of material required to produce a given quantity of goods may be estimated from specifications in the form of blue prints, samples, or other definite information. Such estimates should be considered only as estimates and as a basis for requisitions on storerooms and not as actual costs, for in most manufacturing processes the actual quantities of materials used to produce the goods, will, in the majority of cases vary somewhat from the estimated. This may be due to spoilage, variation in weight and sizes of materials, or a combination of factors over which there is no practical method of control. In the average plant it may also be due to carelessness in controlling the materials through inadequate stores records and storerooms, and to lack of routing control of orders through the factory. In the face of all such difficulties in getting the exact quantities of materials used, many manufacturing concerns will still use such estimates upon which to construct what they term "costs."

In a manufacturing plant operating according to modern production methods, the costs of materials used on manufacturing orders will be obtained from stores issued slips, which are written records of the authorization and charges against specific orders from definite quantities of materials used. The balance of stores clerk having charge of the perpetual inventories of materials according to quantities and values will have made the entries on his inventory records and will have placed the costs of the materials used on the stores issue slips. The cost department will copy the quantities of materials used and the costs of the same on to the cost cards.

Records of Labor Costs

(b) LABOR COSTS—In many plants the so-called labor costs are obtained from estimates made by shop foremen or others in the organization who guess the amount of time which should be spent on any particular operation. I say "guess" advisedly, because I have seen many cases where estimates made in this manner have been only 10 percent of the actual time taken. Some improvement has been made over this method by having the shop foreman or others make out job cards each day charging the employee's time against specific jobs. The advantage in this case, and probably the only one, lies in the fact that it is hardly possible to make a mistake involving more hours than there happens to be in the day's work.

Obtaining Records

In the manufacturing plants operating according to modern methods, the labor costs will be obtained from job cards containing the exact time consumed by the operators and machines, calculated from time stamp records made at the beginning of the operation and at the end. These same job cards will have been used by the routing division and consulted by the shop foremen or their assistants in controlling the work in process. They are then used by the payroll department to compute the earnings of the employees. The elapsed time from the beginning of the operation until it is finished will be entered in the proper spaces. The production in quantities will be entered on the job cards from production reports. The payroll department will then compute the earnings according to the wage system being used, and will enter the result, which is the direct labor cost on the operations, in the proper space.

The total of all the job cards representing the work for each employee for the week will be entered on the payroll and will represent the weekly earnings.

The symbol of the machine or work place used for the operations will have been placed on the job card by the routing division. The elapsed time during which the machine or work place was used will be multiplied by the machine hour rate to obtain the shop expense (overheard) to be charged against the operations. Further explanation will follow.

The job cards, containing the labor costs and shop expenses charged to the orders in process will then be entered on the cost cards by the cost department.

Calculation of Shop Expenses

(c) SHOP EXPENSE—The shop expenses, sometimes called overhead expenses, which should be charged against any particular job, are the most difficult factors of cost to obtain.

In order to discuss this important and most elusive element of cost, it will be necessary to mention briefly the main factors of expense which constitute the shop expenses, and explain how they are obtained.

In the average concern the bookkeeper has charge of the distribution of all charges incurred from the outside; such as purchases of materials, equipment or services. This distribution is usually made in the ledger according to the names of the accounts which have been set up. Very often there is really no logical classification of accounts and I have seen many cases where expense items and expenditures for capital items have been charged to the same accounts, thus making the ledger figures unintelligible from the standpoint of an accountant or an executive. Under such circumstances the bookkeeper is usually required to make correcting entries at the end of the fiscal year, charging to capital what some executive thinks should be charged, and crediting the manufacturing or some other account, which contains a mixture of all sorts of expense and capital charges. It can readily be assumed, and with justification, that accounts thus kept are of questionable value even at the end of the fiscal year, and of practically no value to the management during the year for operating purposes.

Management Value of Cost Records

The greatest value to be obtained from accounts is to afford the management the correct figures, properly classified, upon which judgment may be based.

The control of expenses and expenditures should begin with a thorough classification of accounts. Such a classification should be so complete, that all activities of the business for which records should be kept, and this means practically s'assithing should be included. For this purpose, a mnemonic classi-

fication is undoubtedly the most satisfactory, except in cases where automatic tabulating machines are to be used requiring numbers for sorting and tabulating purposes. In the latter case, a mnemonic system of classification may be used to advantage by using a code of numbers to represent the letters in the mnemonic symbols in all cases where the tabulating equipment is to be used.

Under a mnemonic classification all controlling accounts for expenses, inventories, and plant items (capital accounts) are represented by a letter, or, in some cases, a combination of letters and figures, and then the various subdivisions of these accounts are represented by additional letters or figures. Space will not permit a complete explanation of a mnemonic classification of accounts here, but the following will represent what would appear as a typical classification base sheet.

A—Auxiliary department expenses
B—General administrative expense
C—Selling expenses
D—Shop expense
E-R—Worked materials—manufacturing products
S—Raw materials
T-W—Worked materials—manufactured products
X-Y-Z—Construction—plant accounts.

The following are examples of further subdivisions of the expense classification:

AHM—Repairs and renewals of machinery in the heating department.

A—Auxiliary departments, which designate those that are essential to manufacturing, but not directly concerned with production.

H—Heating department.

M—Machinery in the heating department. (Repairs and renewals are charged to this account.

BL—General administrative salaries and wages.

CS—Supplies; such as stationery, etc., used in the sales department.

DBT—Repairs and renewals of tools and jigs in the bending department.

D—Shop expense (indirect or overhead expense in manufacturing).

B—Bending Department.

T—Repairs and renewals of tools and jigs used in the bending department.

When such a classification is used, the vouchers for goods purchased are marked by the purchasing agent with the proper distribution symbol, which he obtains from the purchase requisition. As mentioned above, the balance of stores clerk or other person who issues a purchase requisition will place the mnemonic symbol on the purchase requisition before the materials or services are purchased. The information necessary to do this is obtained from the instructions on the balance of stores (inventory) sheets, or from the knowledge of what the materials or services are to be used for in the plant.

The vouchers with the distribution symbol are then passed to the accounting department where the amounts, as well as the distribution symbols, are further checked before entry is made in the voucher register.

The records in the accounting department, from which the information is obtained for cost purposes, are: General ledger; operating ledger, which contains the detail distribution of the accounts, and the voucher register where all outside charges are first entered and later distributed to the general ledger and operating ledger; and the journal which is used in making closing entries for cost purposes.

The expenses, as well as expenditures, are thus distributed according to the mnemonic classification, which is so planned that they fall into the exact groups where they will be used in making the distribution for cost purposes. It may be mentioned here that the expense distribution is so planned that when it is completed by the cost accounting division, there will be only two main classes of expenses, namely shop expenses and selling expense. The reason for this may be understood by stating that there are really only two major functions to be performed in manufacturing industries—manufacturing and selling. While the classification provides for general administrative expenses, these are later distributed in total to manufacturing and selling according to a predetermined factor, which will be explained more fully under classification.

The manufacturing or shop expenses are then distributed in such a manner that each machine and work place bears a certain amount of expense per hour in proper relationship to all other machines and work places in the plant. The total amount of shop expense for the year should be absorbed by applying the relative cost numbers of machine hour rates to all manufacturing orders in process according to time occupied on the various operations.

In order to estimate with a reasonable degree of accuracy the amount of time during which the machines and work places will be occupied under normal working conditions, it is necessary to obtain some records of time and production in the plant. Often, at the start, one must to a considerable extent rely upon estimates of shop superintendents, foremen and others in order to arrive at figures representing occupied time of machines and work places which may be used in determining the machine hour rates. Sometimes many of these prove to be very inaccurate, but when the plan is properly laid out by an experienced engineer, the actual results which are recorded when the cost system is in operation will soon indicate the changes that should be made, and, with the figures classified as they should be, it is not a difficult job to make the necessary corrections.

The writer's experience in several types of industries has been that the first relative cost numbers (machine hour rates) determined are only approximately accurate, but even then far more nearly accurate than anything the companies had had before. The second analysis of the rates, which should be made perhaps six months, or not more than one year, after the first, are usually very good, and if the proper control over factory and accounting operations has been accomplished, and a few months' history, operating under such control, has been obtained, the second set of rates is generally accurate for all practical purposes. Naturally, conditions will change at frequent intervals, which makes it necesasry for the person upon whom the responsibility rests, to make the necessary corrections in the rates. This is generally done, but always requires considerable instruction and supervision by a competent engineer until the responsible man in the particular organization is sufficiently educated to handle corrections in the rates.

The writer has investigated the production and cost methods of a number of concerns wherein he found that figures which were used in a variety of ways in different plants to absorb the indirect or overhead expense had not been changed for years, although many changes and additions had been made in the operations of the company. Obviously, the rates, the accuracy of which could be questioned at the start, really were very misleading to the management of the companies referred to. In some cases many clerks had been working month after month compiling figures which, for cost purposes, were worthless.

The writer's personal experience in plants where the production and cost methods have been reorganized and developed under his supervision has convinced him of the necessity for close supervision and instructions of men who are responsible for the supervision of the production and cost accounting work for a considerable period of time.

Shop expenses (overhead) may be divided into two main groups; first, expenses which are present in a going concern whether idle or operating; second, expenses which occur through operating.

In the first group we have: Space cost, or the rent which the

corporation must pay to itself or the owners of the property. When paying rent to itself, they consist of: Depreciation of buildings, taxes on land and buildings, insurance on buildings, repairs of land and buildings, interest on investment in land and buildings, and any other so-called fixed charges. Space cost may be distributed to the various departments according to area occupied.

Also, in the first group we would have heating expense, which is the cost of producing the heat for the building. This cost includes depreciation on boilers and other heating equipment, interest on investment, taxes, insurance, repairs, water, fuel, labor for firemen and others who do the necessary work and any other miscellaneous expenses connected with heating.

The amount of expense for heating to be charged against individual rooms or departments may be made on the basis of radiating surfaces of pipes, radiators, etc., used for heating.

Fixed Charges on Equipment

We also have in the first group certain fixed charges on machinery, tools, furniture and fixtures and other equipment in factory and office. These consist of depreciation, interest on investment, taxes, insurance, repairs and any other expenses which may be incurred even when the plant is idle.

Fixed Charges

The fixed charges in the various departments, exclusive of those which belong to any individual machines or processes, may be expressed as a departmental rate per hour for machine hours, divided according to individual machines or man-hours, or both where both are used.

In the second group, indirect expenses incurred while men and machines are occupied, we have the following:

A—Repairs and renewals of machines, tools and other factory equipment.

B—Supplies used in operating the equipment.

C—Supervision within the manufacturing departments, such as foremen, weighers and counters, etc.

D—General factory supervision, such as superintendents' or production manager's salaries; planning department expenses, etc.

E—General administrative expenses, portion of which should be distributed to manufacturing, such as office salaries and expenses, etc.

F—Power.

G—Any miscellaneous expenses not covered by the above.

A—Repairs and Renewal of Machinery, Tools, and Other Factory Equipment. These expenses, incurred while the machinery, tools and other equipment are being operated in the factory, are determined from factory orders which are issued to the machine shop, mill wright department, or other repair departments, or from replacements of tools and parts issued from the storeroom.

Standing Orders for Repairs

Standing orders are issued for small repairs, and the costs are handled in the same manner as for manufactured goods, namely, the materials are drawn from the storerooms on requisitions, the labor cost is obtained from job cards issued for the repair work, and the machine hour cost is handled in a similar manner to that in the manufacturing departments. Owing to the nature of the work in a machine shop, which exists primarily for a repair department, or in a millwright department, when the workmen are required to perform numerous operations on the work, resulting in the use of many kinds of machinery and tools, and considerable hand work at the bench, it is usually not practical to use a machine-hour rate for the various machines. The most practical plan in such cases is to have a socalled man-hour rate which will absorb the necessary indirect expenses.

The expenses incurred for repair orders are charged to definite machines, tools or equipment. Symbols and cost cards will be kept in the cost department under such symbols.

Handling Repair Charges

A very interesting and instructive history is obtained on each machine or unit of equipment for definite processes, and important tools, by having the repair expenses charged directly to them. Through such information it is often found that certain machines are not economical for the company to operate, or possibly certain parts of the machinery should be strengthened or changed in some manner in order to decrease the repair charges and increase the efficiency of the same.

Under ordinary conditions, where the expenses for repairs usually are approximated by having the machine shop foremen or millwright distribute a certain amount of time to a department, or often only to a certain account, sometimes called "repairs and renewals of machinery, tools, etc., for the whole plant," it is impossible for anyone to tell within a reasonable degree of accuracy just what the conditions with respect to the equipment really are. Of course, any mechanic worthy of the name or millwright, should be able to tell whether the machine will run and produce satisfactory goods or not by watching the machine, but the limits between running and producing good quality merchandise at a low expense or at a high expense are very wide, and easily overlooked without adequate cost records.

Studies Which Stopped Losses

At the plant of the Andrews Wire and Iron Work, reorganized under my supervision, we found that the expenses for repairs and renewals on certain equipment were running very high. They were much higher than the expenses on similar machines doing similar work in other plants where we had installed modern production methods, including a well-developed cost system.

This condition existed for two or three months so that I was convinced that the high cost was not caused by some unfortunate breakdown, as sometimes happens, and an investigation was begun. We took the actual costs of repairs and renewals on the machines, and on certain dies, and computed the expenses per hour running, and found that they were unusually high. Next, we took the orders produced on the machines and figured the cost per 1000 pieces produced. Then we took the sales for a definite period, and cost of sales on the same items, and figured the gross profit, running under reasonable conditions of expenses. Through this comparison we found, in some cases, that the repairs to certain dies alone were more than the profit on the goods, when costs were figured at what we knew would include reasonable expenses for repairs and renewals.

Changes Brought About

This resulted in the management changing construction in some items, thus reducing cost of construction, and eliminating all excessive repair expenses, and in eliminating some of them which were clearly unprofitable. All these items had been manufactured and sold by the company for two years or more, and although their engineering department would rank well with engineering departments in other similar industries, the inefficiency of the above-mentioned equipment was not apparent to them, owing to the fact that no adequate cost records were available.

Such examples could be multiplied many times in practically all manufacturing industries.

Savings Which Are Possible

The savings which may be effected in such a manner would often more than pay for the whole expense of maintaing an adequate cost system, and this is only one of many advantages to be obtained from such a cost system.

The expenses for repairs and renewals of machinery, tools and other factory equipment are charged against such plant items, and constitute a part of the machine-hour rate which is determined for use in distributing the indirect or overhead expenses.

(B)—Supplies Used in Operating The Equipment—The

miscellaneous supplies which are used in factory operations, such as oils, waste, cleaning compounds, plating chemicals, acids, enamels, etc., are drawn from the storerooms on requisitions, and the costs of such supplies are charged against the particular machines, or equipment, or processes used. It is then possible, to keep a very accurate account of the quantities and costs of such supplies used, and by knowing the length of time taken, or the quantities or various goods which go through the various processes, it is comparatively easy to determine the costs per hour of running, or per pound of product, or per unit of quantity of goods produced.

This is very valuable information, and at the present time, when the finishing of goods is becoming increasingly important, it is very essential that manufacturers know what the costs for finishing amount to, expressed in terms of goods finished.

The improvements that have been made in finishing processes have caused many changes in methods. In the enameling of metal goods many radical changes have been made, but many mistakes have been made by manufacturers in adopting certain changes, or in not adopting certain changes, owing to lack of knowledge of costs. I know of certain cases where the adoption of different kinds of enamels, the application of which required less time for labor, proved to be uneconomical owing to the increased cost of the enamel used. A very appreciable part of the cost in this case was due to evaporation of enamel solvents, which could not be detected except by accurate records.

Many other similar cases, with many kinds of finishing supplies, could be cited, which would go to prove the value of adequate stores and cost records. In the average plant the supplies are purchased, and when delivered are sent to the particular department where they are to be used. Under such conditions the foremen in such departments are expected to use the supplies as they see fit, with no control whatever over the amounts used. The purchasing department would distribute the cost to an expense account probably under the title "manufacturing supplies and expense" or probably under "finishing department supplies." In either case the information to be obtained would be practically useless for operating purposes.

As mentioned above, under modern methods, a considerable portion of the costs of supplies used in a factory may be charged directly to the manufacturing orders. Some of these expenses may be distributed on a unit basis on the production of goods in the processes for which the supplies are used.

There are other expenses for supplies which depend upon the time that the machines, tools, or other factory equipment are used, and these should make up a part of the machine-hour rate.

(C)—SUPERVISION WITHIN THE MANUFACTURING DEPARTMENTS OVER FOREMEN, WEIGHERS, TRUCKERS, ETC. The costs of supervision and instruction of employees in a factory are always important factors, although the relative proportions in various types of industries may vary between wide limits.

A considerable proportion of the expense for supervision is incurred through wages of shop foremen and assistants and for weighers, truckers and others, who perform the necessary functions of discipline, instruction recording production, and moving goods in process from one operation to another.

Under proper methods of control such expenses are distributed to reasonably small operating units, sometimes called production centers, where they may be distributed directly as a whole, or in part, to the manufacturing orders in process. If this method is not practical, as is often the case with the shop foreman whose duties require constant changing, these expenses are distributed as indirect expense and go to make up part of the machine-hour rate.

It is generally more nearly correct to distribute expenses to orders in process than to distribute them through the machine-hour rate. With a proper classification of orders and adequate control of orders in process, this method can be made practical in many instances.

For example, the wages of the shop foremen or assistant foremen in charge of a group of automatic machines would ordinarily be charged as indirect or overhead expense. This is also true in cases where a shop foreman or other person is in charge of a particular manufacturing process. However, under modern cost methods the wages of such men would be distributed directly to the various orders on a basis which would be determined as being most nearly correct. Such distribution would probably be according to operating time of the machine, or to quantity of production in the case of a manufacturing process.

(D—GENERAL FACTORY SUPERVISION, SUCH AS SALARIES OF PRODUCTION MANAGER, SUPERINTENDENT, PLANNING DEPARTMENT SALARIES AND EXPENSES, ETC. This group of expenses usually represents one of the comparatively large items of indirect expense which cannot be distributed in a practical manner to the individual orders in process. Therefore, they are so distributed that they form part of the factory indirect, or overhead, expenses which are distributed to the various production departments and are charged against the various orders in process through, the machine-hour rates.

As mentioned before, the expenses are so classified that they are distributed by the cost and accounting departments according to a carefully predetermined plan so that the relative amounts of such burden which all operations must bear are as nearly correct as is necessary for practical purposes.

(E)—GENERAL ADMINISTRATIVE EXPENSES — This group includes those administrative expenses which are charged against manufacturing, such as part of executives' salaries and expenses, office salaries, etc.

These expenses are distributed by the accounting department to the proper account and then the cost department, at the end of each closing period, every month, or possibly every four weeks, distributes them to the various manufacturing departments where they are charged as indirect or overhead expense against the various orders in process.

(F)—POWER—The distribution of power is not often a difficult problem, as most manufacturing plants are now operated by electric power, for which there are definite and comparatively simple means of measurement. Often it is necessary to distribute the power used by a motor to a small group of machines, and this can be done by tests which are known to most mechanical engineers. The average amount of time which the machines are operated must be taken into consideration in distributing the power costs to be charged against the machines for any definite period.

(G)—MISCELLANEOUS EXPENSES NOT INCLUDED IN ABOVE—Sometimes there are expenses which are not included in the above-mentioned classifications, or which for definite reasons it is desirous to show separately on the so-called relative cost number sheet which is used in tabulating the expenses in computing the relative cost numbers or machine-hour rates. Such expenses should be distributed so that the machine-hour rates will correctly record charges against the orders in process.

When all the expenses that are incurred while the machinery and equipment are operated have been tabulated to individual machines, they should be divided by the number of hours during which the machines are operated. This will give the additional rates per hour to be charged while the machinery and equipment are used, and when added to the rates per hour, which are determined for the equipment when idle, will give the total rates per hour to charge against all orders produced on these machines and equipment.

The cost department will multiply the number of hours during which any particular machines and equipment are used on an order to determine the amount of indirect or overhead expense which the order should bear in relation to all other orders in process.

The total cost of materials used, labor cost, and indirect or shop expense, constitute the manufacturing cost of the orders

in process, including expense orders for repairs and renewals, etc. This may be expressed by operations or in total, according to the wishes of the management. A properly developed cost system is flexible, and total costs or operation costs may be made on any, or all, orders for any definite operating period without, in any way, affecting the accuracy of the results. It is simply a matter of securing as much information as the management desires and wishes to pay for, for obviously it requires more clercial work, and consequent time, to prepare detail operation costs than it does to prepare total costs of orders. Both are valuable, but in practice the writer has found that detail operation costs of manufacturing orders for items manufactured are not often required except at rather long intervals of time, unless some important changes in the elements of cost have occurred. A satisfactory plan for practical use may be found by making analyses of a reasonable number of operation costs and establishing standard operation costs with which total costs may be compared. When any important variations occur from the total standard costs, the details should be further analyzed to find out the causes.

ACTUAL COSTS OF EXPENSE ORDERS, SUCH AS REPAIRS AND RENEWALS OF MACHINERY, TOOLS, ETC., IN THE PLANT were mentioned briefly in connection with the determination of indirect or shop expenses that are charged to orders in process, as the expense orders naturally constitute part of the indirect or overhead expenses.

The computation and tabulation of such costs are done in the same manner as costs of goods manufactured. Reference was made to the vast amount of valuable information concerning the efficiency of mechanical and other equipment used in the plant, through the knowledge of the costs of repairs and renewals, and other expense orders.

ACTUAL COSTS OF CONSTRUCTION OF NEW PLANT EQUIPMENT, SUCH AS MACHINERY, TOOLS, BUILDINGS, ETC. Costs on all new or improved construction, items charged to capital accounts, are obtained in the same manner as cost of goods manufactured. When this has been done, the plant inventory values are known so that the proper capitalization may appear on the balance-sheet and the reserve for depreciation may be computed year after year on the cost values of the various items.

COSTS OF GOODS SOLD IN ORDER TO DETERMINE PROFIT AND LOSS ON SALES MADE BY GROUPS OF GOODS OR BY INDIVIDUAL ITEMS—When actual manufacturing costs have been determined and have been used as the inventory values of the merchandise on hand at any particular time, it is possible to determine the costs of goods sold with a comparatively small amount of work. This is done by multiplying the quantities of goods sold in units by the so-called unit or standard costs that have been determined and appear on the inventory records.

When the cost value of goods sold is subtracted from the total selling price of the goods sold, the difference will be the gross profit. From this figure must be subtracted the selling expenses, which include the share of administrative expenses apportioned to selling to determine the net profit.

In practice the management is furnished some very valuable information at the end of each closing period, showing gross profits and net profits on total sales, sales by groups of goods, and by individual items when desired.

When a concern manufactures and sells a wide variety of goods which go to a widely classified line of customers, it is usually very difficult to determine just how the selling expense should be distributed to the individual items, or groups of items sold. However, in practice it is usually possible to prorate the most important factors of selling expenses and the balance may be distributed as a percentage of the value of goods sold.

In practice, an income statement containing the following information has been found to be valuable to executives:

1—Sales per invoices. 2—Frieght, etc., deducted on invoices. 3—Sales per analysis. 4—Cost of sales. 5—Gross profit. 6—Shop expense, total. 7—Shop expense, absorbed. 8—Shop expense, unabsorbed. 9—Selling expense. 10—Discount allowed. 11—Interest paid. 12—Raw material corrections. 13—Materials in departments corrections. 14—Worked materials corrections. 15—Finished stock corrections. 16—Jobbed goods corrections. 17—Total inventory corrections. 18—Total deductions. 19—Discount received. 20—Interest received. 21—Interest on investment. 22—Total miscellaneous income. 23—Net deductions. 24—Net profit.

Reference has been made several times to the accounting records which are necessary in order to supply the necessary information to operate a cost system.

The functions which must be performed in cost accounting may be divided in various ways between the so-called cost department, which includes the determination of costs, and the accounting department, which controls the financial records and performs the usual accounting work.

The writer has, in various industries, made the following divisions of responsibility between the cost department and the accounting department.

A—*Accounting Department*—

1 (a) Post all vouchers to voucher register, distributing expenses and expeditures to ledger controlling accounts.
(b) Post totals of all columns on voucher register for month, or period of four weeks, to controlling accounts in general ledger.

2 Post detailed distribution of all expenses, plant expenditures, and expenditures for materials, to operating ledger, according to mnemonic classification. (Totals of operating ledger accounts must agree with totals of corresponding controlling accounts in general ledger.)

3 Post details of all expenses to the expense distribution sheet from the operating ledger and from information supplied by the cost department.

4 (a) Make closing entries for prorated expenses, and for distribution of expenses, according to information supplied by the cost department, at end of each month, or period of four weeks.
(b) Post figures for these entries to general ledger and operating ledger.

5 When the accounting records are closed for month, period of four weeks, or other closing period, income statements, balance sheets and other statistical records are prepared by the accounting department for executives.

B—*Cost Department.*

1—Tabulate costs of all work-in-process, expense and construction orders, as mentioned before. (These records are made on cost cards in such manner that the information may be easily understood by the executives and in such a manner that comparisons may be made with the greatest convenience.

2—Compute cost of goods sold for the month, four-week period, or other closing period, as explained before.

3—Arrange figures to be used by the accounting department in making the closing entries.

4—Prepare cost and expense statistics for use of executives.

Paper Production in Japan Increases

WASHINGTON, D. C., November 23, 1926.—The mills of the Japanese Paper Manufacturers Association reported a total production of 86,873,887 pounds and sales of 78,053,729 pounds during the month of August, bringing the totals for the first eight months of the current year up to 680,340,783 pounds and 645,681,987 pounds respectively in comparison with 611,919,483 pounds and 583,720,310 pounds during the first eight months of last year, says a report to the Paper Division of the Department of Commerce.

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Trade Marks Department

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The following are trade mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

RIDGEMARK DECKLEDGE—No. 200,282. B. D. Rising Paper Company, Housatonic, Mass. For writing paper, announcement paper, and pulp board.

MARWIN—with picture of a ship—No. 207,111. Martin Winter, New York City. For wrapping papers; tracing and drawing papers; Ledger paper; stationery.

ROUGH CAST—No. 217,512. The Rober Griffin Company, Jersey City, N. J. For wall paper.

COPYAD.—No. 218, 846. Commercial Reproducing Company, Detroit, Mich. For photostats and looseleaf advertising units or data sheets.

No. 218,851. Haynes Corporation, Chicago, Ill. For blank forms, pasted bristol, and cover paper.

E Z—No. 219,417. American Manufacturing Company, Boston, Mass. For rope, cord, and twine manufactured from vegetable fiber.

ZENITH—No. 219,475. Paper & Bag Mills Corporation, New York City. For paper known as second sheets.

GOLDEN GATE—No. 220,652. Jackson C. E. Glass, Oakland, Cal. For toilet paper.

AUTOFOLD—No. 221,228. Autographic Register Company, Hoboken, N. J. For plain, lithographed and printed paper strips, leaves, and sheets for use in manifolding registers, in typewriters, and in other machines.

DIXIE—No. 222,549 Advance Bag and Paper Company, Inc., Boston, Mass. For paper bags.

FRANK B. KENNEDY.—No. 223,175. Frank B. Kennedy, Cleveland, Ohio. For general ledger.

SNOWHITE—No. 225,082. The Dudley Paper Company, Lansing, Mich. For toilet paper.

WEBER—No. 228,341. F. Weber Company, Philadelphia, Pa. For drawing and tracing papers, paper boards comprising academy boards, and painters' boards primed with a coating of glue size and paint for artists' use.

SEAMAN PAPER COMPANY with picture—No. 228,493. Seaman Paper Company, Chicago, Illinois. For uncoated book paper.

TILE-PACK—No. 230,332. E. F. Dodge Paper Box Company, Leominster, Kans. For paper toilet-paper containers.

BETTY BINGHAM.—No. 231,039. Hills, McLean & Haskins, Inc., Binghampton, N. Y. For writing paper and correspondence envelopes.

EVERFOLD.—No. 231,411. Swartwood-Nelson Paper Company, Minneapolis, Minn. For book paper.

SORBIT PAD—No. 231,891. Wynn Products Company, Sterling, fabrics.

PADDEX—No. 233,622. Paddex, Inc., Los Angelese, Cal. For desk pads.

KOPYWRIGHT—No. 234,823. Columbia Ribbon and Carbon Manufacturing Company, Inc., New York City. For carbon paper and typewriter ribbon.

SHASTA—No. 234,927. Schermerhorn Brothers Company, Chicago. For twine, rope, string and cordage.

A G BRAND—No. 235,017. Associated Grocers Company, Inc., St. Louis, Mo. For toilet paper.

RED STRIPE—No. 235,990. The Weston Paper and Manufactur-

PICKWICK—No. 236,273. Kansas City Wholesale Grocery Company, Kansas City, Mo. For paper bags.

PORCELAIN—No. 236,356. The Wrenn Paper Company, Middletown, Ohio. For blotting paper.

ASTRO—No. 236,361. Brittains, Limited, Cheddleton, Nr. Leek, England. For tissue paper generally.

WRITE RIGHT.—No. 236,599. D. & S. Tablet Company, Atlanta, Ga. For writing tablets, notebooks, composition books, typewriter pads, typewriter paper, and loose correspondence sheets in cartons.

MARIE ANTOINETTE.—No. 236,993. E. T. Slattery Company, Boston, Mass. For writing paper, correspondence cards, envelopes, and quill and feather pens.

AJAX.—No. 237,303. Ajax Time Stamp Company, Boston, Mass. For date stamps, certifying stamps, receipting stamps, receiving stamps, indorsing stamps, and ribbon stamps.

PLUSH—No. 237,433. American Tissue Mills, Holyoke, Mass. For crepe paper.

PARCHKIN—No. 237,470. The Paterson Parchment Paper Company, Passaic, N. J. For parchment paper used in greeting cards, lamp shades, etc.

SUNLAND—No. 237,477. Sunland Sales Cooperative Assn., Fresno, Cal. For raisin-tray paper.

Brown Co. Expands Group Insurance

The Brown Company, one of the leading pulp and paper manufacturing corporations in the United States and Canada, has announced an expansion of its group life insurance program that increases the total coverage on its employees in Berlin and Gorham, N. H., and Latuque, Que., from approximately $6,850,000 to more than $8,000,000.

The new arrangement, as explained by H. J. Brown, president of both the Brown Company and its Canadian subsidiary, the Brown Corporation, is the latest development in a general program of group insurance adopted by the Brown interests in 1919, when an outright gift of life insurance was made to all employees. Three years later in 1922, each employee was offered the opportunity of increasing his protection by paying a small part of the additional cost. So large a share of the working personnel accepted this proposal that in 1923 a third offer was made solely to members of the supervisory force, each of whom was permitted to acquire $1,500 more insurance, on a basis providing for payments of premiums jointly by the employer and employee.

Benefits under the additional plan recently put in effect also are confined to supervisory employees. This latest offer enables an employee in the supervisory classification to increase his insurance protection by $5,000 on agreeing to pay a share of the cost.

In addition to the actual protection established by the insurance, all of which is being underwritten by the Metropolitan Life Insurance Company, a visiting nurse service and other similar advantages also are included in the general group plan.

John Manning Co. to Make River Improvements

[FROM OUR REGULAR CORRESPONDENT]

GREEN ISLAND, N. Y., November 22, 1926.—The John Manning Paper Company, of this village, has been given authority to construct an intake, an outlet, a cradle and lay two lines of pipe in the Hudson River at this point and on Big Stoney Island, across the river. The permit was issued through the War Department at Washington after an application had been filed by the Manning Company. Major General Edgar Jadwin, chief of the army engineers, has authorized Colonel W. B. LaDue, engineer for the Northeast Division, to issue the necessary permits so that the Manning concern can proceed with the work contemplated.

The John Manning Paper Company now owns a considerable strip of river front property through its purchase several months ago of the old Odd Fellows Hall property on the banks of the Hudson River. It is in the utilization of this property that the company is planning the work which has just been authorized by the war department. The company's main plant is located several blocks from the river. Just what use is to be made of the river front property has not been announced by the company.

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Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING NOVEMBER 20, 1926

SUMMARY

Cigarette paper .....3,554 cs.
Wall paper .....16 bls., 29 cs.
Paper hangings .....107 bls., 4 cs.
News print .....7,007 rolls
Printing paper .....55 cs., 22 bls., 52 rolls
Wrapping paper .....20 cs.
Packing paper .....15 cs., 244 rolls
Basic paper .....69 cs.
Pergamyn paper .....35 cs.
Cards .....4 cs.
Filter paper .....132 cs.
Drawing paper .....33 cs.
Decalcomania paper .....59 cs.
Transfer paper .....34 cs.
Tissue paper .....21 cs.
Parchment paper .....34 bls.
Note paper and envelopes .....12 pkgs.
Photo paper .....277 cs.
Surface coated paper .....121 cs.
Stencil paper .....42 cs.
Miscellaneous paper .....1,136 rolls, 716 bls.

CIGARETTE PAPER

Standard Products Corp., Franconia, Liverpool, 22 cs.
American Tobacco Co., Schodack, Bordeaux, 1,200 cs.
R. J. Reynolds Tobacco Co., Schodack, St. Nazaire, 1,760 cs.
De Manduit Paper Corp., Schodack, St. Nazaire, 572 cs.

WALL PAPER

Keller, Dorian Paper Co., Franconia, Liverpool, 23 cs.
Tice & Lynch, Franconia, Liverpool, 1 cs.
L. Alavoine & Co., Franconia, Liverpool, 1 cs.
Hudson Forwarding Co., Franconia, Liverpool, 2 cs.
F. J. Emmerich, Hamburg, Hamburg, 2 cs., 8 bls.
Wedeman, Godknecht & Lally, Hamburg, Hamburg, 2 bls.
A. C. Dodman, Jr., Inc., Majestic, Southampton, 6 bls.

PAPER HANGINGS

W. H. S. Lloyd & Co., Minnetonka, London, 22 bls.
A. C. Dodman, Jr., Inc., Celtic, Liverpool, 85 bls.
Whiting & Patterson Co., Majestic, Southampton, 4 cs.

NEWS PRINT

Parsons & Whittemore, Inc., Stuttgart, Bremen, 138 rolls.
Brooklyn Times, Humberarm, Corner Brook, 3,011 rolls.
Brooklyn News, Humbararm, Corner Brook, 2,231 rolls.
N. Y. Post, Humberarm, Corner Brook, 698 rolls.
Bank of Montreal, Humberarm, Corner Brook, 358 rolls.
F. Henjes, Jr., Inc., Hamburg, Hamburg, 61 rolls.
Star Co., Drottningholm, Gothenburg, 510 rolls.

PRINTING PAPER

Maurice O'Meara Co., Stuttgart, Bremen, 23 cs.
P. C. Zuhlke, Lapland, Antwerp, 32 cs.
National Consumers Paper Co., Hamburg, Hamburg, 22 bls.
Keuffel & Esser, Hamburg, Hamburg, 52 rolls.

WRAPPING PAPER

E. L. Garvin, Lapland, Antwerp, 3 cs.
F. C. Strype, Lapland, Antwerp, 8 cs.
International Forwarding Co., Hamburg, Hamburg, 9 cs.

PACKING PAPER

Commonwealth Bank, Hamburg, Hamburg, 15 cs.
Okonite Callender Cable Co., American Trader, London, 244 rolls.

BASIC PAPER

G. W. Sheldon & Co., Lapland, Antwerp, 69 cs.

PERGAMYN PAPER

F. C. Strype, Hamburg, Hamburg, 35 cs.

CARDS

Japan Paper Co., American Trader, London, 4 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 5 cs.
E. Fougera, Majestic, Southampton, 82 cs.

DRAWING PAPER

Keuffel & Esser Co., Hamburg, Hamburg, 33 cs.

DECALCOMANIA PAPER

L. A. Consmiller, Stuttgart, Bremen, 12 cs.
Phoenix Shipping Co., Stuttgart, Bremen, 1 cs.
B. F. Drakenfeld & Co., Lancastria, Liverpool, 40 cs. (Duplex).
B. F. Drakenfeld & Co., Lancastria, Liverpool, 6 cs. (Simplex).

TRANSFER PAPER

Atlantic Forwarding Co., Hamburg, Hamburg, 34 cs.

TISSUE PAPER

F. C. Strype, Lancastria, Liverpool, 15 cs.
Old Master Paper & Pulp Co., Hamburg, Hamburg, 6 cs.

PARCHMENT PAPER

E. Walker, Hamburg, Hamburg, 34 bls.

NOTE PAPER AND ENVELOPES

Syndicate Trading Co., Celtic, Liverpool, 12 pkgs.

PHOTO PAPER

I. J. Gavin, Celtic, Liverpool, 3 cs.
Gevaert Co. of America, Lapland, Antwerp, 274 cs.

SURFACE COATED PAPER

Gevaert Co. of America, Lapland, Antwerp, 72 cs.
P. C. Zuhlke, Lapland, Antwerp, 41 cs.
Whiting & Patterson Co., Hamburg, Hamburg, 2 cs.
Phoenix Shipping Co., Hamburg, Hamburg, 6 cs.

STENCIL PAPER

Shellcross Co., Franconia, Liverpool, 2 cs.
Arlac Dry Stencil Co., Hamburg, Hamburg, 40 cs.

MISCELLANEOUS PAPER

C. K. MacAlpine & Co., Drottningholm, Gothenburg, 30 bls.
The Borregaard Co., Drottningholm, Gothenburg, 907 rolls, 556 bls.
Gilbert Paper Co., Drottningholm, Gothenburg, 34 rolls, 130 bls.
Universal Paper Co., Drottningholm, Gothenburg, 15 rolls.
Arkell Safety Bag Co., Drottningholm, Gothenburg, 180 rolls.

RAGS, BAGGINGS, ETC.

Equitable Trust Co., Stuttgart, Bremen, 58 bls. rags.
N. Y. Trust Co., Stuttgart, Bremen, 22 bls. rags.
Bulkley, Dunton & Co., Stuttgart, ——, 101 bls. bagging.
2nd Natl. Bank of Boston, Celtic, Liverpool, 20 bls. rags.
I. Cohen Son & Co., Celtic, Liverpool, 23 bls. rags.
Mutnick Bros., Celtic, Liverpool, 14 bls. rags.
British Bank of South America, Celtic, Liverpool, 17 bls. rags.
B. D. Kaplan, Lancastria, Liverpool, 17 bls. rags.
Brown Bros. & Co., Caledonia, Glasgow, 32 bls. rags.
S. Silberman & Co., Buyo Maru, Naples, 28 bls. rags.
National City Bank, Cleveland, Naples, 127 bls. rags.
A. W. Fenton, Inc., Hamburg, Hamburg, 38 bls. rags.
E. J. Keller Co., Inc., Hamburg, Hamburg, 126 bls. rags.
Castle & Overton, Inc., Hamburg, Hamburg, 37 bls. rags.
Bulkley, Dunton & Co., Hamburg, ——, 32 bls. rags.
National City Bank, Laura C., Trieste, 55 bls. rags.
Myers, Lipman Woolstock Co., Schodack, Bordeaux, 36 bls. rags.
S. Birkenstein & Sons, Schodack, Bordeaux, 199 bls. rags.
S. Silberman & Co., Schodack, Bordeaux, 41 bls. rags.
C. R. Spence & Co., Schodack, Bordeaux, 107 bls. rags.
E. J. Keller Co., Inc., Schodack, Bordeaux, 91 bls. rags.
S. Silberman & Co., Sangamon, Leghorn, 7 bls. rags.
E. J. Keller Co., Inc., Tiger, Kobe, 100 bls. bagging.
Robert Blank, Geo. Washington, Bremen, 16 bls. rags.

OLD ROPE

National City Bank, Celtic, Liverpool, 107 pkgs.
E. J. Keller Co., Inc., Hamburg, Hamburg, 70 bls.
E. J. Keller Co., Inc., Idaho, Manchester, 86 bls.
American Trading Co., Siboney, Havana, 21 bls.
W. Schall & Co., Bristol City, Bristol, 46 coils.

MANILA ROPE

Ellermans' Wilson Line, Minnetonka, London, 32 coils.
N. Y. Cordage Co., Lapland, Antwerp, 100 coils.
United Fruit Co., Lapland, Antwerp, 20 coils.

SUNN ROPE

De Grauw Aymar, Lapland, Antwerp, 100 rolls.
N. Y. Cordage Co., Lapland, Antwerp, 6 coils.

WOOD PULP

Tidewater Papermills Co., Bornholm, Clarke City, 6,415 bls. wood pulp.
Equitable Trust Co., Lapland, Antwerp, 110 bls. wood pulp.
E. M. Sergeant & Co., Hamburg, Hamburg, 1,200 bls. wood pulp, 202 tons.
Bulkley, Dunton & Co., Hamburg, ——, 600 bls. wood pulp, 101 tons.
Johanson, Wales & Sparre, Inc., Drottningholm, Gothenburg, 500 bls. sulphate.
Johanson, Wales & Sparre, Inc., Drottningholm, Gothenburg, 964 bls. dry pulp.
E. M. Sergeant & Co., Drottningholm, Gothenburg, 1,018 bls. dry pulp.
Price & Pierce, Ltd., Drottningholm, Gothenburg, 900 bls. wet pulp.
Central Union Trust Co., Tyrifjord, Oslo, 2,275 bls. sulphite.
Phila. Girard National Bank, Tyrifjord, Oslo, 250 bls. sulphite.
J. Anderson & Co., Tyrifjord, Sarpsborg, 1,050 bls. sulphite.

WOOD FLOUR

Corn Exchange Natl. Bank, Tyrifjord, Flekkefjord, 400 bags, 20,200 kilos.
B. L. Soberski, Tyrifjord, Fredrickstad, 2,250 bags.

WOOD PULP BOARDS

Lagerloef Trading Co., Stuttgart, Bremen, 217 bls.

CHINA CLAY

National City Bank, Bristol City, Bristol, 515 bags.

BALTIMORE IMPORTS

WEEK ENDING NOVEMBER 20, 1926

Lagerloef Trading Co., Sulina, Stockholm, 678 bls. wood pulp.
National Bank of Commerce, Sangamon, Leghorn, 167 bls. rags.
Phila. Girard Natl. Bank, Sangamon, Marseilles, 259 bls. rags.
M. Gottesman & Co., Inc., Consul Olsson, Stockholm, 7,450 bls. wood pulp.
M. Gottesman & Co., Inc., Orla, Stockholm, 500 bls. wood pulp.
Robert Blank, West Arrow, Antwerp, 204 bls. rags.
Robert Blank, Liberty, Havre, 276 bls. rags.
E. J. Keller Co., Inc., Etna Maru, Hamburg, 126 bls. wood pulp.
Castle & Overton, Inc., Murla, Germany, 954 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING NOVEMBER 20, 1926

E. J. Keller CoC., Inc., West Campgaw, Bremen, 197 bls. rags.
E. J. Keller CoC., Inc., West Campgaw, Bremen, 57 bls. bagging.
E. J. Keller Co., Inc., Westerner, Antwerp, 78 bls. rags.
E. J. Keller Co., Inc., Westerner, Rotterdam, 12 bls. rags.
Robert Blank, Hawaiian, Kobe, 200 bls. rags.
Robert Blank, West Campgaw, Bremen, 125 bls. rags.
Robert Blank, Wheatmore, Glasgow, 54 bls. rags.
Castle & Overton, Inc., Keyingham, Antwerp, 206 bls. rags.

PHILADELPHIA IMPORTS

WEEK ENDING NOVEMBER 20, 1926

Castle & Overton, Inc., Schodack, Bordeaux, 470 bls. rags.
Congoleum Nairn Co., Schodack, Bordeaux, 281 bls. rags.
Robert Blank, Schodack, Bordeaux, 404 bls. rags.
The Stone Bros. Co., Inc., Schodack, Bordeaux, 132 bls. rags.

(*Continued on page 64*)

Horizontally Split Casing Double Suction Pumps

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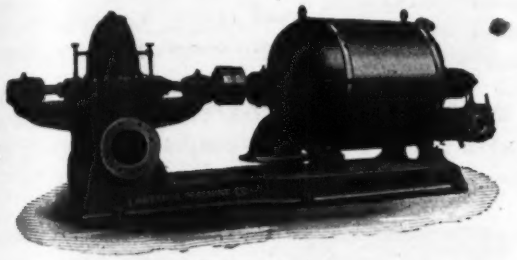
We are the original designers and builders of the LAWRENCE PUMP.



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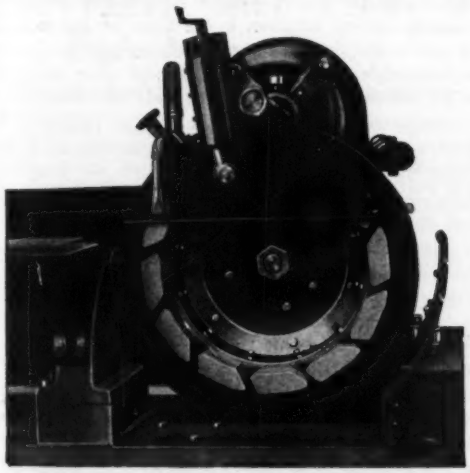

The new traveling wheel grinders have now demonstrated their efficiency in too many mills to leave any question about the real advantages offered.

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Machinery Company of America

Big Rapids, Mich., U. S. A.

Tide Water at the Power Show

THE Fifth National Exposition of Power and Mechanical Engineering Equipment is to be held at the Grand Central Palace, New York, December 6th to 11th, 1926.

You are cordially invited to make the Tide Water booth your headquarters at this Exposition.

Make note of this location—Booth 15A, first floor, 46th Street side,—and be sure to visit us.

The Tide Water Power Group

—for paper mill lubrication

TYCOL GEAR COMPOUND
A soft, semi-fibrous grease for enclosed gears under heavy pressure.

TYCOL LUBRICANT NO. 1
A medium hard grease for Jordans, grease lubricated calender rolls and for general use.

TYCOL MEDIUM YARN GREASE
For beater bearings where high temperatures, heavy pressures and water are present.

TYCOL GREASE
A hard grease for replenishing Tycol Yarn Grease.

TYCOL YARN GREASE
For dryer and other bearings operating at high temperatures.

TYCOL GEAR COATING SOFT
A viscous lubricant especially recommended for use on slow-moving open gears.

TIDE WATER OIL SALES CORPORATION

11 BROADWAY NEW YORK

Imports of Paper and Paper Stock

(Continued from Page 62)

E. J. Keller Co., Inc., Schodack, St. Nazaire, 666 bls. rags.
Bulkley, Dunton & Co., Schodack, ——, 452 bls. rags.
Lagerloef Trading Co., Sulina, Kotka, 825 bls. wood pulp boards.
Chase National Bank, Sangamon, Naples, 210 bls. rags.
Tradesmen's National Bank, Sangamon, Marseilles, 130 bls. rags.
Philadelphia Ledger, Humberarm, Corner Brook, 1,665 rolls news print.
Philadelphia Bulletin, Humberarm, Corner Brook, 2,184 rolls news print.
Paper House of Philadelphia, Humberarm, Corner Brook, 141 rolls news print.
M. Gottesman & Co., Inc., Orla, Stockholm, 600 bls. wood pulp.
M. Gottesman & Co., Inc., Ulissie, Trieste, 800 bls. wood pulp.
M. Gottesman & Co., Inc., A. Tripkovick, Trieste, 1,600 bls. wood pulp.
Robert Blank, London Mariner, London, 183 bls. rags.
E. J. Keller Co., Inc., Murla, Bremen, 48 bls. rags.
Castle & Overton, Inc., Murla, Bremen, 64 bls. rags.
Castle & Overton, Inc., Murla, Bremen, 4,738 bls. wood pulp.
Castle & Overton, Inc., Sarcoxie, Havre, 44 bls. rags.
Castle & Overton, Inc., Sacandaga, Belgium, 236 bls. rags.
Castle & Overton, Inc., Marigot, France, 21 bls. rags.

NEW ORLEANS IMPORTS

WEEK ENDING NOVEMBER 20, 1926

Castle & Overton, Inc., Ontario, France, 232 bls. rags.
E. J. Keller Co., Inc., Julia Luckenbach, Kobe, 200 bls. bagging.
E. J. Keller Co., Inc., Julia Luckenbach, Kobe, 220 bls. rags.

NEWPORT NEWS IMPORTS

WEEK ENDING NOVEMBER 20, 1926

National City Bank, Bristol City, Bristol, 120 bls. rags.

SAVANNAH IMPORTS

WEEK ENDING NOVEMBER 20, 1926

Castle & Overton, Inc., Eastern Victor, Belgium, 177 bls. rags.

130,000,000 Acres of Forest in Quebec

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 22, 1926.—The Hon. Honore Mercier, Minister of Lands and Forests for Quebec, has just issued a profusely illustrated booklet dealing with the forests and water powers of Quebec Province. The forestry resources of the province occupy more than 130 million acres, the booklet shows, and in many of the regions constitute the only possible crop, the land not being suited to agriculture. It is noted that in another way the forests mean a great deal, and that is by holding water and thereby regulating streams. The value of Crown forests as they stand is estimated very conservatively to be $600,000,000, and this takes in only forests which can be reached and, therefore, are commercial. Information is given as to the forestry service, the fire prevention system, and stress is laid on the requirements that all must have permits to move through the forests.

Turning to waterpowers, it is noted that while much has been done in the way of development still much more remains to be done, for of the 15,000,000 horse power available the development has been up to 1,800,000 only, and it is estimated that this development represents a saving of 14,000,000 tons of coal, or $144,000,000.

"In what position would we be without this power?" is a question put before the reader, and the article goes on to speak of the fact that it was due to waterpower development that such places as Kenogami, Arvida, Grand-Mere, Shawinigan, La Tuque and Clark City had come into being. The progress of the province is intimately and proportionately allied with the development of the water powers, it is stressed.

Some valuable information as to the great dams which have been constructed by the Government is given, such as the Gouin dam at La Loutre on the St. Maurice, the Allard dam on the St. Francois, that at Kenogami. The Gouin dam is greater even than the famous Assouan dam in Egypt. By regulating the flow of the waters of the St. Maurice it has been possible to produce the electricity which in great measure supplies Montreal. Reference is made to the great works going on at the Grand Discharge, the contract there calling for a minimum of 230,000 horse power at a cost of at least $12,000,000.

Sodium Sulphate in Western Canada

OTTAWA, Ont., November 22, 1926.—Sodium sulphate of Western Canada, its occurrence, uses, and technology, is the title of a report under the authorship of L. Heber Cole recently issued by the Mines Branch of the Department of Mines, Ottawa, Canada. Although the occurrence of saline lakes in Western Canada has been known for many years it was a search for potash during the Great War that directed serious attention to their commercial possibilities and led to their examination in detail. These lakes occur in depressions in the morainic drift of Manitoba, Saskatchewan, Alberta, and British Columbia; they vary greatly in size and salinity from those in which the waters are only slightly alkaline and in which no crystal bed is present to those containing thick bedded crystal deposits, which at certain seasons are completely dry. These deposits consist chiefly of hydrous sodium sulphate (Glauber's salt) with small percentages of magnesium sulphate, sodium chloride, and related salts. These investigations by the Mines Branch show the presence in the 21 deposits examined in detail of over one hundred and fifteen million (115,000,000 tons of hydrous salts, mainly sodium sulphate.

In Canada sodium sulphate, in the form of salt cake, finds its largest use in the pulp and paper industry and is also employed in the metallurgical, glass, dye, textile, and other industries. Upwards of 40,000 tons, mostly imported, are used per annum. Until recently most of the salt cake used in commerce has been produced as a by-product in the manufacture of hydrochloric acid from common salt.

A map of Western Canada accompanying the report shows the location of some 83 occurrences of these natural deposits and the report contains complete descriptions of 21 of these which were surveyed, drilled, and examined in detail by the field parties under Mr. Cole. The mineralogical, physical, and chemical characteristics of the several salts are described in separate chapters. The probable mode of origin of the deposits is also discussed. The industrial uses of sodium sulphate in the several industries and the technology of its manufacture are described. A method of examining the extent of individual deposits has been demonstrated, the character of the deposits shown, and the basis laid for the future development of extensive industries.

This report is a comprehensive volume of 155 pages fully illustrated with photographs, drawings, and maps. It represents the results of several seasons' field work. Copies may be obtained by application to the Director, Mines Branch, Department of Mines, Ottawa, Canada.

Lubrication Instructions for Speed Reducers

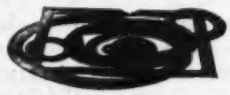
Foote Bros. Gear and Machine Company, of 215 North Curtis street, Chicago, have just published a new bulletin covering the lubrication of their Spur, Worm and Herringbone Speed Reducers, which is meeting with a very cordial reception.

Keep a supply of JENARCO on hand

When leaks demand immediate attention, use JENARCO, a red vulcanized sheet packing. It is well adapted for hot or cold water and saturated steam at all pressures.

Jenarco Sheet Packing

Where a number of gaskets of the same size and shape are required, order JENARCO in ready cut gaskets, and save time and money.



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Jessup & Moore Paper Co., Phila., four orders, total ..... 4750 H.P.
Ontario Paper Co., Ltd.
For Daily Newspaper Co., North Tonawanda, N. Y. ..... 2034 H.P.
Filer Fibre Company, Filer City, Mich. ..... 1500 H.P.
John Lang Paper Co., Philadelphia, Pa. ..... 416 H.P.
Bayless Manufacturing Corp., Austin, Pa. ..... 1300 H.P.
Northern Board & Paper Co., San Francisco, Cal., two orders, total. ..... 400 H.P.
Crown Williamette Paper Co., San Francisco, Cal., two orders, total. ..... 750 H.P.
Delaware Hard Fibre Co., Wilmington, Del., two orders, total. ..... 920 H.P.
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110 East 42nd Street New York

New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, November 24, 1926.

The tone of the local paper market was firm last week, manufacturers having received numerous inquiries about contract deliveries. A good proportion of sales were transacted, and prices remained firm in view of the market's strong tone. Reports of concessions and shadings were few. Manufacturers were optimistic over the outlook.

Large orders of news print, normal for the time of the year, were absorbed by consumers. The manufacturers were kept busy meeting the demand for new supplies.

Box board manufacturers were equally active speeding production to meet a large demand for this product. Prices on fine grades of paper were well maintained, and the tone of the market was strong. The demand for wrapping paper was satisfactory.

Of interest to the pulp market was the report last week that an early winter was expected in Northern Sweden, which, according to manufacturers, would result possibly in an early closing of Baltic navigation.

Mechanical Pulp

Conditions were active last week in the ground wood market, consumers having evidenced an interest in future business. The present supplies, it was said, were large enough to take care of the current demand. Spot transactions were numerous. The market remained firm and prices held up to the quoted levels.

Chemical Pulp

The sale of Sweden's chemical pulp constitutes about 57 per cent of the estimated total production, and this product has been disposed of at about the prevailing prices, according to domestic tabulators who issued this report last week. The market was firm.

Old Rope and Bagging

The market for old rope and bagging was marked by no important changes during the last week. Prices on all grades remained fairly firm, holding up to recently quoted levels. The paper mills, it was said, did not increase their orders for this commodity.

Rags

Rags, new and old, sold in good quantity during the last week. The market for the lower grades was reported to have been somewhat lower. Roofing rags sold well, and white stock it was said, was more in demand than colored. Prices were firm.

Waste Paper

Better grades of waste paper sold in large quantity last week. Shavings were said to have been in excellent demand. Orders coming into the market were still greater than the supply could handle. Prices remained at previously quoted levels.

John Mail Killed at Crystal Tissue Plant

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, November 20, 1926.—What is characterized for Z. W. Ranck, president of the Crystal Tissue Company, as one of the first serious accidents that has ever occurred at the Amanda, Ohio, plant, was that which befell John Mail, an employee of that concern for many years. The fatality occurred recently and cast a shadow over the entire mill force.

Mail was caught in a rapidly-revolving belt pulley and his body whirled about at a terrific rate. When fellow-workmen were attracted to the scene, life was extinct. Though no one saw how Mr. Mail was drawn into the revolving belt it is supposed his clothing became entangled in the pulley and that he was drawn into the whirl of death in an instant.

Mr. Mail was the father of six children and was 32 years of age. His widow also survived.

President Ranck paid a high tribute to the loyalty and efficiency of the unfortunate workman and expressed the deepest sympathy with the widow and children. Many employees attended the funeral which was held from the decedent's home, 306 Charles street, Middletown.

Paper Men Elected to Massachusetts Council

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., November 23, 1926.—Several men in this section were honored at the closing session of the second annual conference of the New England Conference Council, held the past week at Hartford, Conn. R. F. McElwain, of the Crocker-McElwain and Chemical Paper Companies, was reelected a member of the Massachusetts council, as were Joshua L. Brooke, of Springfield, founder of the Brooks Bank Note Company, and Winthrop Murray Crane, of Dalton, of Crane's Mills who takes the place of Horace A. Moses, of the Strathmore Paper Company, who resigned. The work of Mr. McElwain was highly praised by Chairman J. F. Tinsley, of Boston, who said that Mr. McElwain had been a tower of strength to the Massachusetts council; Mr. Brooks, of Springfield, was also highly complimented.

New Neenah Building Nearly Ready

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 20, 1926.—Finishing touches are being placed on the new office building of the Neenah Paper Company, Neenah, Wis. The final work included beautifying of the grounds by a landscape gardener. The first floor will be used for the main offices of the company, and the second story for additional offices, a mill laboratory and a rest room for women mill employees. The structure is 80 feet long and 36 feet wide.

Technical Association Fall Meeting Papers

The proceedings of the Fall meeting of the Technical Association have been published as a second number of Technical Association Papers, Series IX (1926), and similarly bound. The volume is the stenographic report of the discussions at the three sessions, and covers the subjects of Waste and Stream Pollution, with special reference to waste sulphite liquor; Washing Pulps including soda, sulphate and sulphite; and Deinking Magazine Stock. The price of the book is $2.

Revolvator Worm Gear Drive

The Revolvator Company of 336-352 Garfield avenue, Jersey City, N. J., have just published a bulletin on their Worm Gear Drive, Electric Portable Elevator, which is thoroughly described and profusely illustrated.

Four Decades of Specialized Experience

Mr. James D. Lacey, President of the Lacey Securities Corporation, has had more than forty years of experience in serving the forest industries.

This long record of specialized service is a distinct asset to our customers. It assures a thorough understanding of conditions and trends in these basic industries and places us in a particularly favorable position to make financing arrangements, on a sound and efficient basis, for companies needing more capital. Inquiries are invited, without obligation, from such companies in the lumber, pulp and paper, and allied industries.

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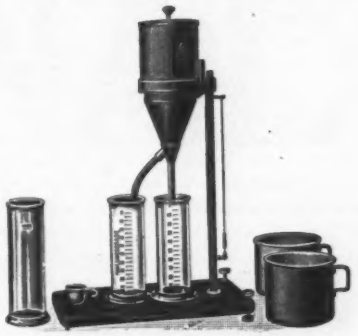

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Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, November 24, 1926.

Demand for paper makers' chemicals during the last week showed no sign of falling off, the movement into consuming channels having been well up to the average. Inquiries concerning future business continued to pour in to manufacturers.

BLANC FIXE.—The market for blanc fixe held up to recent averages during the last week, the movement into consumption of both pulp and dry having been satisfactory. Manufacturers continued to buy fairly large supplies, and prices remained unchanged. Pulp sells for $60 a ton in bulk; the powder brings 4¼ to 4½ cents a pound, in barrels, at works.

CASEIN.—A slight easing off in prices was noticed last week in the casein market. Supplies, according to manufacturers were more liberal on both the domestic and the imported grades. Domestic grades are quoted at from 14½ cents to 17 cents a pound. Imported casein brings from 15 to 16 cents a pound, all in bags.

BLEACHING POWDER.—The market for bleaching powder was very firm during the last week, shipments having moved forward at a brisk rate. The powder still sells for $2 to $2.40 per 100 pounds in large drums at works, according to quantity and size of container.

CAUSTIC SODA.—Leading manufacturers continued to book sales on caustic soda on the new contract prices announced last week. Others adjusted prices on the basis of the contracts for the current years, so that considerable deviations from the basic price were reported. The new quotation is from $3 to $3.05 per 100 pounds in large drums at works.

CHINA CLAY.—The china clay market was fairly steady during the last week, manufacturers having reported no important changes. Imported clay is quoted at from $13 to $22 a ton, in bulk, ship side. Domestic wash clay brings from $8 to $9 a ton at mine, and pulverized $10 a ton.

CHLORINE.—Supplies of chlorine moved forward in excellent volume during the last week in the face of a large demand. The market was firm, and manufacturers received many inquiries about future business. Liquid chlorine is quoted in tanks at works at 4 cents a pound on contract, and from 4¼ to 4½ cents a pound on spot trade.

ROSIN.—The rosin market was steady during the last week. Prices were well maintained, manufacturers having reported little if any shading. Gum rosin was still quoted at from $13.10 to $13.20 per 280 pounds in barrels from the docks, and wood rosin advanced to $10.50 per 280 pounds, in car loads, f.o.b. Southern shipping points, buying being very heavy.

SALT CAKE.—Offerings in the salt cake market continued to be as scarce last week as the week before, while sales were as frequent. The tone of the market was firm and prices were maintained at from $18 to $20 a ton in bluk at works.

SODA ASH.—Current shipments of soda ash against contracts were very large last week. While, as in the case af caustic soda. manufacturers adjusted prices on the basis of the current schedule, others continued to book sales on the new quotations—in car lots at works per 100 pounds $1.17½; $1.32½ in bags; and $1.59½ in barrels.

STARCH.—Consumers continue to receive large shipments of starch last week at the currently quoted prices. Special papermakers' grades bring $3.42 per 100 pounds in bags, and $3.59 per 100 pounds in barrels.

SULPHATE OF ALUMINA.—More manufacturers of sulphate of alumina received inquiries about future business, and spot transactions held up to recent averages. Business progressed along routine lines, prices remaining firm. Commercial grades sell at from $1.40 to $1.45, in bags, at works, in car lots. Iron free brings from $2 to $2.05 per 100 pounds, at works

SULPHUR.—Shipments of sulphur against contracts progressed at an encouraging rate last week. The market was firm, and prices remained unchanged. Sulphur is quoted at from $18 to $19 a ton in bulk at mine.

TALC.—Manufacturers of talc spent a busy seven days last week trying to catch up in their work of filling orders for this commodity. The large demand from the consumers continues to pour in, and the market was firm. Domestic talc sells for from $16 to $18 a ton at the Eastern mines. French talc, ship side, brings from $18 to $20 a ton.

Thomas T. Webster Addresses Traffic Club

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, November 20, 1926.—When the Miami Valley Traffic Club holds a meeting, a large attendance is assured for there are many members in the busy mill and industrial centers of the valley.

The last meeting held recently at the Hotel Manchester, Middletown, was no exception to the rule. A pleasing feature was the fact that Thomas T. Webster, of the George H. Mead paper interests, Dayton, and who is president of the National Association of Traffic Clubs was introduced.

Mr. Webster, who is regarded as one of the leading traffic experts of the country, was re-elected president of the national organization at the recent convention held in Milwaukee, Wis.

Mr. Webster told of the responsibilities of traffic club members toward the educational program mapped out by the National Association.

An inspiring address on "Character in Business" was delivered by Frank B. Pauly, former newspaper man and present postmaster of Middletown. He asserted that business is doing more for real progress than all other human activities combined, and that a more distinctive and significant service is being rendered in and through private business enterprises.

"The primary processes of production, distribution and consumption touch life at more points and oftener than all other social processes combined," he stated. "True business represents the mutual organization effort of society to minister to the economic requirements of civilization. It rests squarely on the law of service. It has for its main reliance truth and faith and justice. Thus business, rightly conducted, is building character—good character."

Damages Awarded Paper Mill Worker

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 20, 1926.—Damages amounting to $15,000 have been awarded to William Moore, who was injured while employed by the Marinette Pulp and Paper Company, Marinette, Wis. The suit was brought against the Chicago, Milwaukee and St. Paul railway, however, and not against the paper mill.

Mr. Moore sued for damages amounting to $50,000 as the result of an accident on Nov. 12, 1925, and a settlement finally was agreed upon at $15,000. He is a man 66 years old, and at the time was unloading pulp from a freight car at the Marinette plant. A string of cars attached to a switch engine were understood to have become uncoupled by accident and these ran along the siding on which the pulp car was standing.

A collision resulted which sent the car against an abuttment and Mr. Moore suffered a broken neck. He is obliged to wear a cast and death may result any time from the least jar. He has chances to live for some time, however.

Spokane Paper Organization Expands

SPOKANE, Wash., November 20, 1926.—John W. Graham & Co., general paper merchants, have just opened their Greater Graham Store, comprising the new store on First avenue and the remodeled store on Sprague avenue. Having increased their building space, John W. Graham & Co. are able to maintain their high standard of service, and to increase their clientele.